

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY**

EAGLE VIEW TECHNOLOGIES, et al.
Plaintiffs,

vs.

CIVIL ACTION
NO. 1:15-cv-07025-RBK-JS

VERISK ANALYTICS, INC., et al.,
Defendants.

MARKMAN HEARING

UNITED STATES COURTHOUSE
ONE JOHN F. GERRY PLAZA
4TH AND COOPER STREETS
CAMDEN, NEW JERSEY 08101
OCTOBER 12, 2017

B E F O R E: THE HONORABLE ROBERT B. KUGLER
UNITED STATES DISTRICT JUDGE

A P P E A R A N C E S:

WALSH PIZZI O'REILLY & FALANGA
BY: LIZA WALSH, ESQUIRE
and
KIRKLAND & ELLIS LLP
BY: ADAM ALPER, ESQUIRE
GIANNI CUTRI, ESQUIRE
MICHAEL DeVRIES, ESQUIRE
BRANDON BROWN, ESQUIRE
Counsel for Plaintiffs

McCARTER & ENGLISH
BY: SCOTT CHRISTIE, ESQUIRE
LEE BROMBERG, ESQUIRE
BRIAN LARIVÉE, ESQUIRE
TOM FULFORD, ESQUIRE
MATTHEW SKLAR, ESQUIRE
Counsel for Defendants

ALSO PRESENT:

Erica Womer, Esquire

Certified as true and correct as required by Title 28,
U.S.C., Section 753.

/s/ Karen Friedlander, CRR, RMR
Robert B. Tate, CCR, RMR
Lisa Marcus, CCR, RMR

*United States District Court
Camden, New Jersey*

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1 THE DEPUTY CLERK: All rise.

2 (OPEN COURT, October 12, 2017, 9:45 a.m.)

3 THE COURT: Good morning.

4 RESPONSE: Good morning, Your Honor.

5 THE COURT: Everybody have a seat, please.

6 Well, thank you all for coming to beautiful downtown
7 Camden. I don't know if all of you have been here before, but
8 it's -- this is an interesting case, and I think we should
9 start with the appearance of counsel who intend to speak
10 today.

11 Let's start with Ms. Walsh. Are you going to speak
12 today?

13 MS. WALSH: Good morning. I'm going to make the
14 introduction.

15 THE COURT: Great.

16 MS. WALSH: And then maybe handle if there are any
17 disputes. But, hopefully, there are not going to be any, so
18 I'm going to be quiet for the remainder of the day.

19 Appearing on behalf of Eagle View, Liza Walsh from
20 Walsh Pizzi O'Reilly & Falanga. With me is my co-counsel from
21 Kirkland & Ellis, Adam Alper.

22 MR. ALPER: Good morning, Your Honor.

23 THE COURT: Good morning.

24 MS. WALSH: Gianni Cutri.

25 MR. CUTRI: Good morning, Your Honor.

1 MS. WALSH: And Michael DeVries.

2 MR. DeVRIES: Good morning, Your Honor.

3 THE COURT: Good morning.

4 MS. WALSH: And also back there, I have Brandon
5 Brown.

6 MR. BROWN: Good morning, Your Honor.

7 THE COURT: Good morning. Thank you.

8 MS. WALSH: All four gentlemen will be presenting
9 today, Your Honor.

10 THE COURT: Okay.

11 MS. WALSH: One at a time.

12 (Laughter.)

13 THE COURT: Thank you.

14 And who do we have for defendants.

15 MR. CHRISTIE: Good morning, Your Honor. Scott
16 Christie from McCarter & English. With me are my colleagues
17 and partner, Lee Bromberg.

18 MR. BROMBERG: Good morning, Your Honor.

19 MR. CHRISTIE: The two of us will be doing the
20 primary presentation today. Also with us are our colleagues
21 Brian Larivee and Tom Fulford and Matt Sklar and we represent
22 the defendants Verisk and Xactware.

23 THE COURT: Great. Thank you.

24 How do you want to start this? I understand that you
25 want to make a presentation on the technology involved, a

1 little tutorial, is that right?

2 MR. ALPER: Yes, Your Honor. Adam Alper for
3 plaintiff.

4 So we've agreed on a way to proceed, subject, of
5 course, to your approval, Your Honor.

6 THE COURT: Sure.

7 MR. ALPER: The parties would first like to begin
8 with some background on the technology. We've decided to
9 present that to you through our experts.

10 THE COURT: Okay.

11 MR. ALPER: So we will do a little direct, each side
12 will do a little direct of our experts. We will go first and
13 then the defendants will go, and then with Your Honor's
14 approval, we will move into the terms, and the way we've
15 decided to -- or we're proposing to go through those is to do
16 it, sort of what they call ping pong fashion where one side
17 puts on what they have to say, the other side puts on what
18 they have to say, and there can be rebuttal, subject to,
19 again, Your Honor's approval and patience.

20 And the way that we decided to go through those is that
21 we would alternate who goes first. So the defendants will
22 start off, lead off on the first term, we will lead off on the
23 next, and split it down the middle. Of course, again, if that
24 sounds good.

25 THE COURT: That sounds like a good plan.

1 MR. ALPER: Okay. Great.

2 THE COURT: Let's hear from the experts.

3 MR. CHRISTIE: Your Honor, before that, may I make a
4 quick record?

5 We've exchanged slides late last night and we are
6 concerned a little bit about their proposed expert
7 presentation. It appears from the slides, anyway, that it
8 contains largely factual information, promotional material
9 about their products and some legal advocacy.

10 If so, you know, there is no foundation for it and it
11 would be an inappropriate use of the expert and beyond the
12 scope of inappropriate technology. So I've advised opposing
13 counsel of my concerns, but I just wanted to emphasize to the
14 Court that after the fact, we may move to strike some or all
15 of the expert presentation of plaintiffs.

16 THE COURT: I'm not sure what the objection to
17 promotional materials is.

18 MR. CHRISTIE: When I say "promotional material," I
19 mean promotional material about their products. This is a
20 technology tutorial, Judge. We are educating the Court about
21 the technology underlying the patents. We're not promoting
22 how great the plaintiff's products are. We're not introducing
23 factual information into the record through this expert
24 witness, and he's certainly not qualified to promote any legal
25 positions or do any legal advocacy. So again, as a

1 prophylactic --

2 THE COURT: I would ignore any legal advocacy. I'm
3 not worried about that. Why wouldn't I want to hear the
4 promotional materials? This is what I assume they tell their
5 prospective clients as to how this works, right?

6 MR. CHRISTIE: Well, Judge, I think there's some sort
7 of a disconnect because we're talking about the patents.
8 There's no foundation to establish that their products
9 practice the patented technology. And again, we are here just
10 to talk about the patents.

11 THE COURT: Well, I presume that the expert is going
12 to say this is what it does, this is how it does it, right?

13 MR. CHRISTIE: I suspect that they will actually say
14 here's our product and here's what our product does.

15 THE COURT: Right.

16 MR. CHRISTIE: Not necessarily here is the patented
17 technology and here's an explanation of that to the Court as
18 to how this technology works, which again, is the source of
19 what we perceive to be part of the disconnect.

20 THE COURT: I assume the tutorial is to demonstrate
21 how it works, what it is and how it works.

22 MR. CHRISTIE: The technology.

23 THE COURT: The legal conclusions to be drawn from
24 that are not the expert's, but they're mine, correct?

25 MR. CHRISTIE: Correct.

1 THE COURT: I think I can handle this.

2 MR. CHRISTIE: Understood. Thank you.

3 THE COURT: Thank you. Did you want to go first with
4 the expert?

5 MR. ALPER: Yes. And, Your Honor, I'm going to begin
6 with just a couple of words introducing our company and then
7 we will ask our expert, Dr. Bajaj, to come and bring you
8 through the tutorial.

9 THE COURT: Fine.

10 MR. ALPER: Okay. So if I may take the podium, Your
11 Honor.

12 THE COURT: Sure.

13 MR. ALPER: And we're going to bring in some slides.

14 THE COURT: Do you have a handout for me?

15 MR. ALPER: I'm sorry?

16 THE COURT: Do you have a handout to me?

17 MR. ALPER: We do. If we may approach to hand up the
18 slides.

19 THE COURT: Thank you. Do you have extra copies?

20 MR. ALPER: Yes, Your Honor.

21 THE COURT: Hand one to the young lady in the red
22 behind you, please. That's Loretta Smith. She's my law clerk
23 who is working on this particular case. How did she get that
24 assignment? Well, we won't go into that.

25 (Laughter.)

1 THE COURT: Okay.

2 MR. ALPER: Okay. So, Your Honor, in your binder,
3 there are two tabs. The first tab is going to be Dr. Bajaj's
4 technical tutorial. The rest of the slides are the -- we will
5 call the lawyer slides, the slides that we will be making our
6 presentations. My handful of slides, just to introduce the
7 parties, are going to start on that second tab. So if you go
8 to the second tab for now, and we can go to Slide 2. And, by
9 the way, I'll just note for the record, the cover of our
10 binder has the wrong date on it. I apologize, Your Honor. It
11 says October 11th, today is October 12th.

12 So if we could go to Slide 2. We obviously represent
13 Eagle View. Eagle View was founded in 2008, Your Honor, and
14 has been widely recognized for changing the roofing industry
15 through its technologies.

16 The technologies that Eagle View is responsible for
17 relate to -- relate to -- they're technologies that greatly
18 enhance and assist the ways that insurance companies value the
19 damage to roofs in order to efficiently, expeditiously assess
20 those claims and get them fixed.

21 If we go to the next slide, these are the inventors on
22 the two -- on the patents-in-suit. They are the founders of
23 Eagle View and Mr. Pershing was the former chief technology
24 officer.

25 If we go to the next slide, this is Slide 4, these are

1 the products that Eagle View makes and sells. Eagle View
2 creates software that has the patented technologies or relates
3 to the patented technologies that -- including software that
4 produces these roof reports. It also sells the roof reports.
5 The roof reports are what the insurance companies then can use
6 to expeditiously assess claims and come up with the cost of
7 the damaged roof in order to get the claim paid, and then
8 Eagle View also has its own storehouse of aerial imagery that,
9 as you probably -- you know and as we will get into, is a key
10 input or a key part of the patented technology.

11 If we go to Slide 5, from the very beginning, from the
12 outset when the products hit the market, Eagle View's
13 technologies were recognized widely as being revolutionary.
14 We just put a couple of sample third-party press articles
15 here, but you can see, CNN, Finance, Bloomberg recognizing
16 Eagle View as reinventing the area of the roofing industry,
17 reshaping the entire industry and changing the way that the
18 insurance companies go about -- or insurance companies and
19 their roofers go about actually getting these damaged roofs
20 fixed.

21 And that's not only something -- that's not recognition
22 that's only occurring back when the products first hit the
23 market.

24 If we go to the next slide, Slide 6. It's something
25 that goes on until today. So, of course, we're all familiar

1 with the hurricanes that have plagued the southeastern United
2 States. These are a couple of recent articles and statements
3 that -- about Eagle View's technology in connection with those
4 situations where people have their homes destroyed, their
5 roofs are damaged or destroyed, and they need to get them
6 fixed quickly and they have to work through their insurance
7 companies, and it's Eagle View's technology that allows for
8 the rapid assessment of the cost of those roofs in order to
9 get the claims assessed, get a contractor paid to get out
10 there and actually fix the roofs.

11 And as you can see, this is an article from 2016 on the
12 top and the one on the bottom from 2017, talking about Eagle
13 View's technology in connection with these hurricanes. And,
14 in fact, Eagle View actually received accolades directly from
15 the insurance companies and also custom -- the people out in
16 the field for its technologies, because it helps them get
17 their houses fixed.

18 Okay. I'm going to skip Slide 7. That's just a
19 listing of the patents that are in suit here, and move on to
20 Slide 8. So Xactware and Verisk, those are the same -- Verisk
21 is the parent entity, the Xactware is the subsidiary and their
22 business traditionally is on a little bit different side of
23 the insurance adjusting business.

24 They make software and other tools in order to allow
25 generally insurance companies to manage claims, and the Eagle

1 View part of this is sort of a -- they use that, they rely on
2 the Eagle View roof reports and Eagle View technologies in
3 order to assess claims, and they have kind of the overall --
4 whoops, I'm sorry -- the overall platform to allow insurance
5 companies to kind of intake the claims and deal with them.

6 Very early on, the defendants recognized the value of
7 Eagle View's technology when it hit the market and, in fact,
8 after Eagle View came out with its technologies, the
9 defendants attempted to purchase Eagle View, and they -- they,
10 recognizing the strength of the innovations and also the
11 patents, and I'll touch on that in just one moment.

12 They were unsuccessful in purchasing the company and
13 after that, came out with the competing roof reporting
14 technology that's, of course, the subject of this lawsuit.

15 But before they did that -- if we go to my final slide,
16 Slide 9. Eagle View -- I mean -- I'm sorry, the defendants
17 recognized the strength of the Eagle View technology and the
18 strength of Eagle View's patents, and so this is an example of
19 that here, where the Verisk president and CEO is acknowledging
20 the significant intellectual property including 20 issued
21 patents that Eagle View has, and those 20 patents include the
22 seven patents-in-suit that we're here -- that are here today,
23 which, of course, all made it through the patent office and
24 I'm -- as Your Honor may be aware, have now survived 14
25 separate inter partes review petitions.

1 With that, I'm going to now ask my colleague Mr. Cutri
2 to come up and also our expert, Dr. Chandra Bajaj to come up
3 and do some more background to the technology.

4 THE COURT: Something you want to say?

5 MR. BROMBERG: Yes, Your Honor. May I give a brief
6 response to that opening statement?

7 THE COURT: Are you going to have your own opening
8 statement?

9 MR. BROMBERG: Well, we will have our -- we will have
10 our expert witness to go on after Dr. Bajaj.

11 THE COURT: All right. Why don't we do it at that
12 time then.

13 MR. BROMBERG: Do you want to do it at that time?

14 THE COURT: Sure. I think it makes more sense to do
15 it then.

16 THE COURT: Doctor, come up here, please. Would you
17 raise your right hand.

18 (**CHANDRA BAJAJ**, having been duly sworn as a witness, testified
19 as follows:)

20 THE COURT: State your full name.

21 THE WITNESS: Chandra Bajaj.

22 THE COURT: Spell your last name, please.

23 THE WITNESS: B-A-J-A-J.

24 THE COURT: Doctor, have a seat here. And try to
25 remember to speak into this, so they can hear what you've got

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1 to say, please.

2 Counsel, you may proceed.

3 MR. CUTRI: Good morning, Your Honor. Thank you for
4 the opportunity to present this tutorial to the Court.

5 I'm going to lead Dr. Bajaj just through his background
6 and then at that point, he will take over essentially, and try
7 to do his best to teach Your Honor about the background
8 technology that's at issue in the case.

9 (DIRECT EXAMINATION OF CHANDRA BAJAJ BY MR. CUTRI:)

10 Q. So with that, Dr. Bajaj, if you would please tell the
11 Court a little bit about your background, and in particular,
12 how some of your background relates to the technology that's
13 at issue in this case.

14 A. Well, thank you, Your Honor, for the opportunity to tell
15 you about the technology and background. Briefly about
16 myself, I'm a professor of computer science at the University
17 of Texas at Austin. You know, I've had about 35 years of
18 experience in the underlying technologies, the finished
19 processing, computer vision graphics.

20 I direct the Center of Computational Data Analysis and
21 Visualization at the center at the University of Texas now.
22 I'm also a fellow of several technical societies, the
23 Advancement of Science, Applied Mathematics and the ACM, which
24 is the computing machinery, which is the computer science main
25 technical society and the IEEE. So that's a brief bio.

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1 MR. CUTRI: Your Honor, Dr. Bajaj is prepared, if
2 it's okay with the Court, to step down here and to the podium
3 and do his presentation from here. It may be a little bit
4 easier for him to gesture and reference certain slides.

5 THE COURT: That's great. Doctor, if you can do this
6 more easily down in the well of the court, please do so.

7 THE WITNESS: Thank you very much.

8 Thank you. I'm much more accustomed to standing up
9 and lecturing rather than sitting down.

10 THE COURT: I bet you are.

11 THE WITNESS: So, as I get into the technology and
12 the background, it was -- I was thinking it was time to at
13 least introduce a little bit about why this technology was --
14 is created. There's a need for, you know, as Mr. Adam pointed
15 out, roof estimate reports are generated, the software
16 underlying the technology and that is -- there's a need felt
17 for it.

18 So why do we need roof estimate reports and why do we
19 need this kind of technology?

20 So what you're seeing on the picture on the left is, of
21 course, a damaged roof. It seems to be a minor damage, but
22 it's a damage and it requires roof repair.

23 This on the right shows actually much more extensive
24 damage, and also it's, you know, the inability to access
25 portions of the roof getting hampered and, of course, you can

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1 get catastrophic damage as we are seeing in the last several
2 months, even just a few days ago in California where large
3 communities are being destroyed. And so clearly, roof repair
4 is an absolute must and is occurring at a rapid pace.

5 So who needs this roof information? And there are two
6 broad categories that Adam pointed out, but I thought I would
7 also mention it, they are the contractors and the builders,
8 and there's the insurance companies and they are needing to go
9 back in, repair the roofs and, of course, insurance companies
10 tend to pay for these roofs.

11 We've all dealt with them. I've dealt with them, too,
12 as an individual.

13 So, you know, what is a prior art that this technology
14 replaces? The state of the art has been, for a long time,
15 guesstimating, and this is a term that, you know, I -- is
16 often used and it's partly because the roofs are very
17 complicated and it's harder to access them and hence, they are
18 -- there's a danger involved to them as well, so contractors
19 are constantly under pressure not to underbid because if they
20 underbid, they lose money. Insurance companies also don't
21 want to lose money and so they don't want to overestimate.

22 This idea of guesstimating is, of course, an
23 approximation and ends up that several times they are wrong,
24 and so partly, you know, the void that was filled in by this
25 technology is to go back and replace this guesstimating

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1 approach, as I'll show you.

2 Generally, roofs are hazardous, you know, roofs that
3 need repair, there can be very slick conditions and it's
4 dangerous to even go up and clamber up on even a four-story
5 roof. Of course, roofs can be very complicated and they are
6 architecturally beautiful, but they are also with very steep
7 pitches and inclines, and even if you can manage to clamber up
8 those roofs, they are very dangerous. Of course, there's also
9 the issue of scaleability, you know.

10 If you're going to have a community destroyed, every
11 house here potentially needs repair. How do you go back and
12 send insurance adjusters; how do you back and send contractors
13 to go back and give you a guesstimate, you know.

14 So this -- the hazards, the time taken,
15 inaccessibility, all boils down to clearly there was a need
16 for a solution.

17 And this is what the inventors came up with. Chris
18 Pershing, who was a software engineer at Microsoft and David
19 Carlson, who was actually a roof contractor, and they were
20 related, so, you know, David's brother-in-law is Chris
21 Pershing and as he, you know, explained in his deposition,
22 which I watched, he -- and I pulled out a small, little
23 excerpt from them: Imagine if you could actually use
24 photographs, aerial photographs, and that was the idea of
25 using aerial photography to actually measure roofs, and he

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1 goes on to say that, you know, at the beginning, this is --
2 and also part of the deposition, which when you hear, saying,
3 I was constantly underbidding, I was losing money and it was
4 dangerous. There were times I didn't go back and clamber up
5 on roofs and so on.

6 So that's when he went to Chris Pershing and he agreed
7 that we could use aerial photographs and they went and also
8 considered the fact that maybe a single photograph is not
9 enough. We aren't going to be able to use just a top-down, as
10 I'll show you. From a top-down, you can only make out
11 outlines, you can't make out these pitches of the roofs. So
12 Chris, being a software engineer, quickly took to the idea and
13 he did some rough calculations, and this is his journal book
14 and I've taken out a few excerpts from it, and therein you
15 see, you know, his rough calculations. And he's saying, is
16 this feasible, and you can see pictures of views from
17 different angles and some calculations and making area and
18 length measurements.

19 Then he actually did a brief case study on his own
20 house and that's what he documented in 2006.

21 So therein lies the seed of the invention and, of
22 course, this slide put into place in all these patents and
23 Adam has already pointed out the technology of the company.

24 So in my next few slides, I'm going to go back and show
25 you how this process works, very briefly.

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1 So how these roof models generated from aerial images
2 and how these roof estimate reports and the detail on some of
3 them.

4 The picture on the left is a snapshot from their
5 software called Render House which I've also observed in
6 action. And what you can see here is an aerial photograph and
7 also you can see some -- some overlays in blue. These
8 overlays in blue on this two-dimensional aerial image is
9 actually a projection from a three-dimensional wire frame
10 model.

11 This is, you know, a representation of the
12 three-dimensional roof model that they construct from these
13 aerial images, and what you're seeing on top are several
14 images in a thumbnail, and what they can do is select any one
15 of these images or select them in groups of two.

16 From this imagery, they go back and build these models,
17 and then they generate a roof estimate report.

18 MR. CUTRI: Your Honor, we do have a sample copy of a
19 roof estimate report, and with the Court's permission, I can
20 hand it up and you can take a look at it.

21 THE COURT: Let me see it. Thank you.

22 Perhaps we should mark this as Plaintiff's 1. P-1.
23 I'll mark it. Thank you.

24 (EXHIBIT P-1 WAS MARKED FOR IDENTIFICATION)

25 MR. CUTRI: We have an extra copy for staff.

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1 THE COURT: Give one to Ms. Smith, please.

2 MR. CUTRI: And for the record, Your Honor, this roof
3 report that I've handed Your Honor is partially excerpted and
4 blown up in the slides that were provided to opposing counsel,
5 but this is the underlying document and you can obtain these
6 -- this is a sample that Eagle View makes available for
7 prospective customers, but you can obtain this type of report
8 for essentially any roof in the United States in approximately
9 24 to 48 hours.

10 THE COURT: Continue, Doctor.

11 THE WITNESS: Thank you, Your Honor.

12 So, as you can see in this report, you know, it's at
13 least an eight-page report. It's fairly detailed. It's got
14 several aspects to it, but it also uses a lot of terminology,
15 which is, you know, consistent with roofs and their features.
16 And so I thought I'd give you a brief overview of some of the
17 terms that I've mentioned in the report, and as you go back
18 and see why they are also, you know, partly important.

19 One of the most important things are pitches. It was
20 also mentioned in the -- in the testimony, or the deposition
21 of Carlson, we can't get pitches out of top-down views. We
22 need more than one top-down view. And pitches are essentially
23 the slope of the roof. It's measured in units where you give
24 units of, you know, if you go, say, 12 feet forward, how high
25 do you go? So that's the ratio of how high you go if you move

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1 12 feet forward. That ratio is called the pitch.

2 There are other terms, as well, hips and ridges, and
3 while they might seem very familiar, they are also important
4 because certain things are used in valleys, which are
5 different to what I used on ridges. So they need that kind of
6 labeling of the various features, and we use this term
7 "feature," to mention all of these lines and ridges and hips
8 and even corners.

9 Eaves are overhangs, dormers are like little windows
10 coming out of roofs, and rakes -- looks like a rake, is a
11 small little roof on top, like an A frame on top of the roof.
12 So this is what's expressed in this report, and as you look
13 through, you know, one of the pages has a length diagram and
14 this length diagram, you see the outline and you see color
15 coding.

16 The dark red are ridges, and it says ridges -- total
17 amount of ridges is 120 feet and the blue is valleys, and
18 there are 288 feet of valleys. And rakes are 114, and so much
19 are the eaves. The eaves are all in the black outlines in the
20 back.

21 And using this, you can start to see how a builder,
22 constructor needs that information to go back and see what
23 material costs are involved and what the different types of
24 labor is.

25 And it goes on, it tells you the pitches. The pitches

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1 are labeled with numbers, and they just leave the number,
2 which is the numerator, so it's 10 divided by 12, that's the
3 steepness and that's a fairly steep slope. If it's 12 by 12,
4 that would be nearly vertical. Zero would be flat.

5 So given -- the numbers are important because it tells
6 you how the inclines are. Then you go on and can see area
7 diagrams, and there are square feet measurements. All of
8 these numbers are in square feet. So depending on the measure
9 and the quantity, there's detail provided. And then there's
10 an overall summary of the reports so that they can do some
11 analysis.

12 So it's a fairly detailed report, and I won't go and
13 spend more time on it, but that's partly, you know, what the
14 requirement is.

15 And to be accurate in this report is of primal
16 importance and hence, the need for the software technology
17 that would take imaging and build the roof models from which
18 these roof estimate reports can be generated. Without that,
19 you can't -- you're guesstimating.

20 So that was the -- in some sense, the key portions of
21 the invention. Of course, there's lots of detail and I'll
22 step through a few highlights only, given time.

23 So, you know, how do you generate these roof estimate
24 -- roof estimate reports from three-dimensional roof models
25 taken from aerial imaging? So you've got plan views of aerial

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1 photographs, but as we know that there's not enough, you have
2 also what I call oblique perspective views. These are views
3 from the side, so you can see parts of the elevation and not
4 just see the outlines of the roof and footprints of the roof,
5 so different, oblique.

6 So as you can see over here on this top view, there's
7 this black-colored roof and you can see the detail in this
8 oblique perspective view here, and you can see the front where
9 all these three dormers are. You can see them in this view,
10 as well as this view. Not everything is sometimes visible in
11 a single view and hence, the need for more than one view as
12 well.

13 So what the technology then does is goes back and takes
14 these images, extracts this information, these features and
15 goes back and builds the roof model. So part of that
16 extraction is when you're working with two or more images, is
17 to get a certain amount of what is called correlation. And
18 this is one of the terms that is being used. And so what,
19 essentially, it does is -- says, look at the left image, the
20 top plan view and look at the right image. I know that they
21 correspond. But I want to be a little bit more exact.

22 I want to pluck out features. There's a little ridge
23 feature marked in red, there's another ridge feature. They
24 correspond. So that's -- this peak here, which is colored in
25 blue, corresponds to this peak here. This little facet, which

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1 is a section of the roof, corresponds to this facet.

2 So you're matching up features. It's awfully important
3 not only to look at the roof features, but also get some kind
4 of relative ground level features. So you can see this little
5 green L-shaped feature is the pavement and the pavement in
6 here and the pavement in there correspond.

7 And there's also a shrub, which is marked in a circle,
8 so that you're not flipping the house around and you're
9 registering it properly. So you know that the shrub is in my
10 left corner of the house, so that must be on the left corner
11 of the house. So such correspondence of features allows you
12 to correlate the images.

13 Once you -- this process of correlation also allows you
14 to build the third dimension, the missing dimension, because
15 aerial photographs or oblique photographs are all two
16 dimensional. The roof models and the roof structure is three
17 dimensional, so how do you get that missing dimension?

18 Well, through this matching of these features within
19 the images, one can then get three-dimensional information for
20 all of the features of the three-dimensional model. And I'm
21 showing you two pictures of the three-dimensional model or the
22 roof model, this is called the wire frame model in the
23 patents, and this is a shaded rendering of that wire frame
24 model.

25 But this is just an initial model, because there can be

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1 several inaccuracies, and so there's a process, then, of going
2 back and refining this model as explained in the -- in the
3 several patents.

4 The key term of "pitches," is one thing that is not
5 completely correct or confirmed to be correct, and that's the
6 refinement that I'd like to step you through in the next
7 couple of slides.

8 So how do I make sure that the model that I've
9 initially created, you know, how do I make sure that it's
10 completely consistent, as well as has accuracy, because that's
11 what the fundamental drive is for.

12 So there are several different interface tools and
13 there's software that allows you to manipulate this
14 three-dimensional model, and there's something called a
15 protractor tool, something called an envelope tool and a wire
16 frame tool.

17 Again, in interest of time, I'll just focus my
18 attention on the wire frame tool. So this wire frame tool, as
19 you notice -- these are pictures, by the way, from the patent.
20 So this is the '737 patent and left to right are Figures 5B,
21 5D and 7B. So I'm focused on 7B right here.

22 So in 7B, you will notice the -- are outlines and
23 little white squares that are given in the patent and also
24 labels.

25 So while the numbers, 7111 and so on are just labeling

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1 different sections of the roof, these little white handles is
2 explained to be handles, which can be manipulated by the user,
3 so the user can move them around to readjust the wire frame if
4 it doesn't fit right onto your aerial imagery, and the numbers
5 on top of these sections are the pitch. It's plus 4. That
6 means 4 divided by 12. It's at a slope of one-third, so
7 that's the pitch.

8 And so you can change the pitch, and to change the
9 pitch, you can use this interface tool and this wire frame
10 model and directly edit this wire frame model. And the key
11 part of this invention is, are we doing motions or
12 interactions -- the user, I should say, not I, the user will
13 be doing interactions at two dimensions on the imagery, on the
14 wire frame model, and he will be manipulating the shape in
15 three dimensions, and hence, refining the shape as he goes
16 along.

17 So as -- as a simple example, I made a small animation
18 to explain how this user interface can be used in this
19 scenario. So these are the same picture from the patent, but
20 what I've done is, I've colored it and the red and the shading
21 is mine. I just made that so that I could explain to you on a
22 better -- on what the motion could be, interaction is, and
23 these white handles are what we're going to manipulate.

24 So the user wants to change the pitch of this roof,
25 this panel. Is going to change the panel pitch from four to

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1 five and he's going to use a two-dimensional image and he's
2 going to select these handles which as the patent specifies,
3 can be selected singly or in groups.

4 So you can select an individual handle or you can
5 select two or more such handles. You can move an entire
6 feature collectively. So if he selects the left one and the
7 right one, he selects this entire line feature and he's going
8 to drag this line feature to the blue, from the red position
9 to the blue. And I built this little animation to show you
10 that.

11 So this was the original four pitch and he wants to
12 modify this pitch to a five, and he's going to drag this
13 feature from the red position to the blue, and when he drags
14 it, he changes the tilt of the pitch of that roof five.

15 So this is a computer graphics user interface,
16 sometimes they call it a graphical user interface icon that
17 you can manipulate as an operator so that you can then make
18 modifications on your roof model in three dimensions using
19 only two-dimensional imagery.

20 The next one is another kind of modification process.
21 So there are many steps that are built into the software.
22 It's not, you know, you have images and suddenly, you get a
23 model. There's a whole process and accuracy and refinement --
24 I mean, to achieve accuracy, you have to constantly refine the
25 model.

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1 So in this process, we want to actually use twin views.
2 So in the first case, we're just using -- manipulating a
3 single image and then seeing it in the other. Here, you can
4 manipulate an image and you can see it in the other and look
5 at the corresponding responsive changes that occur. Because
6 after all, you are manipulating something in three dimensions
7 and you're looking at like persons in flatland and only
8 two-dimensional projections. So you need that confirmation.

9 So here, the same drawing can be changed in one drawing
10 and automatically the system will go back and change those,
11 and so here, as you move this here, this thing moves there and
12 the software allows you to show that. And this is one of the
13 other highlights of their shape modification and
14 three-dimensional modification of the -- so these are the
15 technologies that underlie.

16 I took this little snapshot but, you know, given
17 interest of time, if you'd like me to, I can -- you know, this
18 is part of their Eagle View Twister software and here is, you
19 know, the operator is making this change. You can see on this
20 leftmost image, the initial wire frame model when projected
21 down has overlays, has lots of errors. This thing is hanging
22 way out here. You can see this error in the roof, you could
23 also see this ridge point should have been here at the rake,
24 it's not. It's all been corrected here and by making these,
25 you know, user-operated changes, and as those changes are

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1 made, you're building a more accurate model of three
2 dimensions from which you generate the roof estimate report.

3 So that's the process. There's a lot more detail, you
4 know. This one, I actually, you know, worked with the
5 software engineers, they gave me a demo of this software
6 because I wanted to be convinced that it was part of the
7 interaction metaphor and how it worked, and these are
8 snapshots that they generated then from that. I thought I
9 would include that as well here.

10 So with this -- you know, this is just my final
11 slide -- we're just saying, that's what's underneath the wraps
12 of -- starting from aerial imagery, building models,
13 generating roof estimate reports, and there's a lot more
14 details, I'm sure you will get into.

15 MR. CUTRI: Thank you, Your Honor.

16 THE WITNESS: Thank you.

17 MR. CUTRI: I think that concludes Dr. Bajaj's
18 portion of the testimony, unless Your Honor has questions.

19 I was going to just direct you to the last two slides
20 in this stack. On Slide 30, this is -- we're actually looking
21 at a screen shot from the defendants' software system, and you
22 can see that when an adjuster is preparing to consider whether
23 to pay a roof claim or pre-approve a claim for a damaged roof,
24 they can go to the tools menu and they can drop down and
25 request info from Eagle View. And what that does, inside the

1 defendants' software, is it will generate some version or
2 parts of or the entire part of the roof report. That roof
3 report then travels from Eagle View's system into Xactware's
4 system.

5 As Mr. Alper alluded to earlier, if you look at
6 Slide 31, what -- what happened was when Eagle View showed
7 that this could be done, that you could use aerial images to
8 create these roof reports in 2008, by about the fall of 2008,
9 Xactware had heard about this, and said, well, we'd like to
10 get that technology into our system, and you're seeing here on
11 Slide 31, a 2009 press release by March of that year.

12 Eagle View and the defendants had reached an
13 arrangement whereby the roof reports would be provided through
14 the defendants' system, and you could see that this is
15 Xactware's press release stating that: Using aerial
16 photography and patent-pending software, Eagle View accurately
17 calculates measurements for the roof's ridges, rafters,
18 valleys, slopes and more.

19 And then there's a quote from Jim Loveland, who was
20 then the CEO of Xactware, and he says: Eagle View provides
21 cheap technology for insurance adjusters and service providers
22 using our products within the reconstruction and remodeling
23 industries.

24 So where we are today is that since that time and since
25 the time that Xactware has tried to acquire Eagle View and has

1 been unsuccessful, Xactware has -- and I've got to be careful
2 about the public record, but they have developed technology to
3 generate roof reports that we think infringes Eagle View's
4 patents.

5 THE COURT: Did you want to ask any questions of the
6 witness?

7 MR. BROMBERG: No, Your Honor, but we have lost our
8 realtime feed for some reason.

9 THE COURT: Let's get that fixed.

10 MR. BROMBERG: I want to get that fixed, and then I'm
11 ready to proceed.

12 THE COURT: Let's take a short break, then, so we can
13 work on this.

14 RESPONSE: Thank you, Your Honor.

15 THE COURT: Thank you.

16 (RECESS TAKEN; 10:26 a.m.)

17 (In open court at 10:34 a.m.)

18 THE DEPUTY COURT CLERK: All rise.

19 THE COURT: All right. Are we fixed? Up and
20 running? I hope. Let's go. Have a seat.

21 MR. CHRISTIE: Your Honor, may I briefly be heard
22 about Dr. Bajaj's presentation?

23 THE COURT: Sure.

24 MR. CHRISTIE: Thank you. Based upon my prior
25 presentation to the Court, we do object in part to his

1 presentation as follows, Judge: As you heard, there was a
2 focus on the Eagle View products, not on the patented
3 technology, and there was no foundation whatsoever that their
4 products practiced the patented technology at all. In fact,
5 our view is that plaintiffs are using the products of theirs
6 to construe the patents which is inappropriate, and I think
7 the most egregious example of that is slide number 22 which
8 deals with three purported embodiments of a pitch
9 determination marker. And as you heard, Dr. Bajaj focused on
10 the third of them which is the wire frame. Judge, that is
11 legal advocacy.

12 One of the key issues that you will hear about from us
13 is whether a wire frame constitutes an embodiment of a pitch
14 determination marker. We strenuously disagree with that
15 perception and as a legal argument they are aware of that and
16 they are using their expert to bolster their legal argument in
17 their supposed technology tutorial. For the above reasons,
18 Judge, we object to Dr. Bajaj's presentation.

19 THE COURT: Did you want to respond?

20 MR. ALPER: Certainly, your Honor, just briefly. The
21 tutorial was intended to be just that, just background to the
22 technology. To be very clear, and you will see this in our
23 presentations, we are not relying on expert testimony for our
24 constructions nor do we believe the Court needs to in order to
25 arrive at the proper constructions. The intrinsic evidence is

1 everything you need. So, I disagree with the objection, and
2 we are not certainly, as you will see when you get to the
3 presentations, we are not using the expert -- we're not
4 intending to rely on expert testimony for the constructions.

5 THE COURT: Well, to the degree it's necessary, I'll
6 overrule the objection. I'm not sure what the basis of it is.
7 I don't take any legal significance from what the doctor
8 stated. He simply was explaining for my benefit how it works.
9 Whether or not it has anything do with how I construe some of
10 these terms remains to be seen. So, let's proceed.

11 MR. BROMBERG: Thank you, your Honor. Lee Bromberg
12 for the defendants, and I'm going to present the technology
13 tutorial that we have prepared for the Court through our
14 expert witness, Dr. Joseph Mundy.

15 Before I do that, your Honor, I just wanted to make two
16 large points, and the first one was in relation to the factual
17 description that we heard from Mr. Alper at the beginning of
18 this presentation, and you notice that he said that Verisk
19 came into existence in 2008, the same year as Eagle View.
20 Well, Verisk was actually a new name for a company that had
21 been around for decades called Insurance Service Office, and
22 as the name, that name implies, it's a big provider of data
23 and information and services to major insurance companies.
24 That's its main business, tables on life expectancy, tables on
25 risk factors, information concerning claims, information

1 concerning underwriting. So, that's its business. It's been
2 around for a long time.

3 And then you will notice that Mr. Alper said that
4 Xactware goes back to 1986, and that's true. Xactware was
5 started as a company to provide information concerning what it
6 would cost to renovate old houses. And then it expanded, and
7 it developed along the way a very important tool called the
8 Xactimate® platform, and you will hear more about that as this
9 case goes along, your Honor. The Xactimate® platform will
10 tell you how much it costs to reconstruct a house, a roof, a
11 shack, a castle, a big building, you name it, based upon the
12 local pricing for any particular area of the country. So, if
13 you're building your -- rebuilding your house in the New York
14 suburbs, you might get one price, if you are building them in
15 the Iowa suburbs, it might be a different price. But the
16 Xactimate® platform is the industry standard for insurance
17 companies in doing that.

18 Now, Verisk acquired Xactimate® in 2006, and at that
19 time the Xactimate® platform was already well established as
20 an industry standard for figuring out claims information and
21 underwriting information for insurance companies, and what
22 came along in 2008 with Eagle View was this roof estimation
23 software program, and there were actually a number of
24 companies, two of whom Eagle View sued to put out of business
25 at that time, and Xactware, then a division of Verisk, decided

1 to do a business partnership with them.

2 So, these parties are not only litigants in a patent
3 case, they are also business partners and they remain that
4 today, because virtually every roof report that comes out of
5 Eagle View that is on the insurance side goes through the
6 Xactimate® platform.

7 And what happened in 2008 after they signed this deal
8 for the Eagle View roof reports, just like the one that was
9 handed up to you, to be delivered to customers such as
10 insurance companies through Xactware's Xactimate® platform,
11 what happened once they signed up this deal at the end of 2008
12 was Eagle View's sales went from about a million to tens of
13 millions. They went up like the proverbial rocket, because
14 once they were on the Xactimate® platform, which most of the
15 big insurers used, it became very desirable to use them.

16 So, we believe that that is what explains the great
17 success of this product in the marketplace, and it doesn't
18 have anything to do with the patents which are the subject
19 here today.

20 So, I'll leave it there, your Honor. There's a
21 complicated history, but that's the basics.

22 THE COURT: I just want to say this. This is all
23 really interesting, Counsel, on both sides, and I thought it
24 fascinating that discussions about the attempted purchase and
25 it fell through and all that. Maybe some day if it gets that

1 far the jury is going to enjoy hearing all this, but it isn't
2 helping me determine what these terms mean today, which is
3 really what I want to focus on, and I'm going to give you
4 great leeway because I'm interested in the background, I
5 really am, and how the parties got together and what happened
6 and all that and what they do, but it's not going to help me
7 define these terms.

8 MR. BROMBERG: I couldn't agree with you more, your
9 Honor. I would just say one thing about that purchase. It
10 was agreed upon. There was a signed agreement. And the FTC
11 said no, you can't do that because you are competitors and
12 we're not going to narrow competition in this market.

13 THE COURT: Well, maybe some day we'll straighten all
14 that out, figure it all out. Maybe today is not the day.

15 MR. BROMBERG: Okay. So, the second thing I wanted
16 to say, your Honor, was simply that as your Honor has just
17 correctly pointed out, this is a claim construction hearing,
18 how to construe the terms of the patents, and I don't think we
19 heard one reference to the patents so far.

20 THE COURT: We will.

21 MR. BROMBERG: And the --

22 THE COURT: Look, I don't -- I'm not going to
23 criticize the plaintiffs. It was very helpful for me.
24 Reading the materials, I got some sense of how this all works,
25 but I think the doctor's explanation was very helpful just to

1 explain exactly what happens during the course of the process
2 in coming up with the report, and I anticipate that your
3 expert is going to help me further understand the process
4 here.

5 MR. BROMBERG: Yes, I think he will do that, your
6 Honor, and with that, let me call him to the stand to give you
7 the background, the technology background to these patents.

8 So, we would call Dr. Joseph Mundy to the stand.

9 THE COURT: Dr. Mundy, please. Sir, how are you?

10 THE WITNESS: Good.

11 THE COURT: Raise your right hand.

12 (JOSEPH L. MUNDY, HAVING BEEN DULY SWORN, TESTIFIED AS

13 FOLLOWS:)

14 THE WITNESS: Yes.

15 THE COURT: State your full name.

16 THE WITNESS: Joseph L. Mundy.

17 THE COURT: Spell your last name, please.

18 THE WITNESS: M-U-N-D-Y.

19 THE COURT: Dr. Mundy, have a seat. Now, are you
20 going to want to testify from the lectern?

21 THE WITNESS: I think that would be more clear.

22 THE COURT: All right. Keep your voice up so we can
23 all hear what you've got to say.

24 MR. CHRISTIE: Your Honor, may I hand out our copies
25 of the slide presentation?

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1 THE COURT: Please. Thank you.

2 MR. BROMBERG: Your Honor, we plan to proceed in much
3 the same way that the plaintiffs did with Dr. Bajaj.

4 THE COURT: Do you want to ask him a few questions
5 about his background?

6 MR. BROMBERG: Sure.

7 THE COURT: Or do you want to just let him explain
8 it. Whatever you prefer, it's up to you.

9 MR. BROMBERG: Yes, that's exactly what I want to do.

10 (DIRECT EXAMINATION OF DR. MUNDY BY MR. BROMBERG:)

11 Q. Dr. Mundy, can you tell us, sir, what your educational
12 background is?

13 A. I have a Ph.D. in electrical engineering from Rensselaer
14 Polytechnic Institute.

15 Q. And, Dr. Mundy, where did you spend your -- where have
16 you spent your working career?

17 A. My career started at General Electric's research
18 laboratory in Schenectady, New York. I worked there for
19 around 35 years. After that I became a professor of
20 engineering at Brown University. I was there for 14 years.
21 And now I have a company in Providence, Rhode Island carrying
22 out research in photogrammetry for the U.S. intelligence
23 agencies.

24 Q. What are the U.S. intelligence agencies, sir?

25 A. It's a combination of the CIA, the National Geospatial

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1 Intelligence Agency called NGA, and we also do work for the
2 Defense Advanced Projects Research Agency, DARPA.

3 Q. Have you done work for those companies before you started
4 your company, sir?

5 A. Yes. The National Geospatial Intelligence Agency funded
6 much of our work at Brown, the work of myself and my students.

7 Q. When you were at GE for those 35 years, did you also have
8 an academic appointment, sir?

9 A. Yes, I was an adjunct professor at Rensselaer Polytechnic
10 Institute for around 25 years.

11 Q. And can you explain in general terms the areas that you
12 do your work in?

13 A. My primary background is in computer vision with a
14 geometric emphasis, in other words, studying the properties of
15 three-dimensional models and their projection into images and
16 also how to recognize such objects from images.

17 Q. Did you prepare a technology tutorial for us today, sir?

18 A. I did.

19 Q. And I think we have it up on the screen and I'm going to
20 let you proceed from here, if you will explain what you have
21 to present.

22 A. All right. Thank you.

23 If I could have the first slide, please. Why don't we
24 go to the next slide.

25 The patent specification states that the operation of

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1 the patent ideas rely on the science of photogrammetry. As we
2 can see from this excerpt from two of the patents, the basic
3 underlying procedure is something that's called triangulation,
4 which I'm going to explain in a moment, wherein we select two
5 points in two or more images. Those points define rays, as I
6 will show in a moment, and these rays intersect in
7 three-dimensional space to define the location of a 3D point.

8 If we assemble enough of these 3D points, we can, of
9 course, construct a 3D model of an object, and that's the
10 basis of the technology that the patent relies on. These
11 photogrammetric algorithms that are referred to here were not
12 actually a subject of the invention but preexisting technology
13 that the invention relies upon. So, let's look at that
14 history of those algorithms.

15 Here is the basic approach of triangulation which I'm
16 going to explain. We're going to run a little animation here
17 where first we're going to select a point in the first image
18 that defines a ray which is a line in space. We have a second
19 point in the second image which defines a second ray. Those
20 two rays intersect to create the 3D point. I hope that's
21 clear.

22 The next slide shows the triangle that we just formed,
23 and through the principles of trigonometry, since we know the
24 distance between the two cameras and we know the angle of the
25 rays, we can compute the intersection point, which is the 3D

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1 location. This principle of triangulation is what was
2 referred to in the specification quote that I just mentioned,
3 and this trigonometric calculation I think is familiar to
4 anyone who has graduated from high school. I myself had it in
5 my junior year, so-called side angle angle formula. Of
6 course, the principle of triangulation is not new, it's been
7 understood for maybe even millennia.

8 Next slide. One more element of photogrammetry which
9 is part of the underlying technology is so-called epipolar
10 geometry where if we select a point in the first image, we may
11 not know where it lies in the second image, but has been shown
12 mathematically that it must lie on a line through the point
13 where the line joining the two camera centers intersect the
14 second image, the so-called epipole. And the epipolar line is
15 swept out as we move the point through 3D space, since from
16 just a single image we don't know how far it is from the
17 camera, but we do know it is going to sweep out a line in the
18 second image. That's so-called epipolar geometry that's
19 inherent in any pair of images.

20 So, these are the two fundamental principles of
21 photogrammetry that the algorithms refer to and the patents
22 rely upon, and these principles have been known for some time,
23 and let's look at that.

24 Next slide. In the beginning, the idea of surveying on
25 the ground, of course, involves triangulation. And if we go

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1 here to this picture, this is a textbook from 1702 which shows
2 the principle of triangulating 3D points on the ground by
3 changing the angle of a disc on the top of a horizontal table
4 and sighting a far away object, such as a bush that you see
5 there, and then the table is moved to a new location and you
6 resight that same feature, and from the difference in angles
7 you can compute how far away the feature is from the table
8 locations. This is actually standard practice in surveying.
9 But again, it relies on this triangulation principle which we
10 just talked about which is inherent in using aerial images to
11 assess the location of 3D features.

12 Next slide, please. This principle was then applied to
13 aerial imagery in the second half of the 19th century. At
14 that time, as I'll explain in a moment, the collection of
15 images from the air was necessarily using hot air balloons
16 because aircraft hadn't been invented by that time. But
17 nevertheless, one can capture images from above and then use
18 them, using the triangulation principle that I just mentioned,
19 to learn the 3D geometry of scenes on the ground.

20 If we go to the next slide, we see that by World War
21 II, the mathematics of photogrammetry had been embedded in a
22 mechanical computer so that an operator could fuse the two
23 images in their head and then essentially, just like virtual
24 reality today, they could fly through three-dimensional space
25 by adjusting these screw wheels that you see there to mark out

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1 3D points in the scene. And through this mechanism, they
2 could create a topographic map from aerial photographs. In
3 fact, I'll have a video in a moment that shows that.

4 Now, going back a bit earlier, though, to sort of trace
5 through the mathematical underpinnings of all this, it really
6 started with artists who were trying to understand how
7 complicated curved objects projected into a painting, and you
8 see here a wood cut by Duerer that shows an underlying
9 principle of how artists went about finding the projected
10 shape of 3D objects by essentially running strings from a
11 point on the wall to a point on the curved object and then
12 measuring where that projected into the image. And so they
13 set up a whole set of rules for how this projection works so
14 that artists could create realistic paintings that had
15 realistic 3D depth impression. But this wasn't understood
16 mathematically at this point in time.

17 It took another couple of centuries -- the next
18 slide -- for mathematicians to explain how this projection
19 really works. One of the big puzzles that they had at that
20 time was how a point far away at infinity can project to a
21 finite point in a painting. For instance, you're looking off
22 over the sea at the horizon which is infinitely far away, how
23 can that infinite point become a finite point in the image.
24 And that took the development of projective geometry in order
25 to explain that on a sound mathematical principle. And

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1 Poncelet, that we see here, is one of the main contributors to
2 that theory.

3 Next slide, please. Here we see that by the end of the
4 Nineteenth Century, the mathematics and the practice of
5 photogrammetry was essentially complete. Here we see a paper
6 by Finsterwalder that describes the geometric theory of
7 photogrammetry, and I think he would be somewhat surprised to
8 learn that constructing roofs from aerial images was novel.
9 Here you see a figure from his paper that shows the 3D
10 reconstruction of a complete building.

11 Also, the epipolar geometry that I mentioned was also
12 well understood at that time. Here we see a figure from 1883
13 which shows the construction that I illustrated in my first
14 slide.

15 Now, around the middle of the Nineteenth Century, it
16 became possible to collect aerial photographs. Here we see I
17 think a rather remarkable photograph of the Arc de Triomphe
18 from 1868. It has very good detail. It was collected by
19 Tournachon in a hot air balloon.

20 In the next slide, we see another paper by
21 Finsterwalder where he has used two aerial images of an area
22 to construct a topographic map. Essentially he is
23 constructing lines, contour lines at a given elevation as well
24 as the 3D geometry of the monastery that you see there
25 outlined in red. And I do note here that he had no

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1 information really about the location of these photographs.

2 He was able to determine that mathematically from just the

3 photographs themselves.

4 Next slide, please. So, let's move ahead to around

5 World War II. Even though this video was taken from 1966, it

6 portrays really what was available at World War II in terms of

7 using aerial photography to recreate 3D models. Here we see,

8 first of all, we have to collect the aerial imagery, that's

9 the camera, and then we are going to fly over an area of

10 interest, and we are using a bomb sight that you see there to

11 locate exactly where the photograph is being taken. So, we

12 now have a bit more information about the photographs, which I

13 think you will hear talked about as metadata from time to time

14 during the proceedings, latitude and longitude of where the

15 photograph is taken.

16 Here we see the film being developed. The images are

17 then pieced together into a larger scene. They are put into

18 the machine that I mentioned. The operator here is fusing the

19 images in his brain to create a 3D impression, and then he is

20 moving around in 3D space and plotting points. And here you

21 see a contour line being plotted by the machine. And at the

22 end, we can end up with a 3D model of the scene.

23 Here you see a technician who is constructing 3D models

24 based on the information collected from the aerial

25 photographs. Obviously this is not very automated and it

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1 requires a machine shop to construct the models, but the
2 underlying mathematical and algorithmic tools were already in
3 place at that time.

4 Next slide, please. Now we move into the '60s by which
5 time digital computation was available, and the idea of
6 reconstructing 3D objects from multiple images was of great
7 interest even from the very early days of the availability of
8 computers. We see here a couple of images of work, early work
9 at MIT by Larry Roberts and Ivan Sutherland. They sort have
10 had complementary skills. Larry Roberts develops early
11 digital algorithms for reconstructing 3D models from images,
12 and Ivan Sutherland developed early display means by which
13 these models could be rotated and visualized in 3D on the
14 computer screen. And so by that time then the digital
15 creation and display of 3D models was in hand.

16 Next slide, please. By 1985, I had kind of entered the
17 picture here and this is the frontis piece of a paper that I
18 coauthored describing a system for digital reconstruction of
19 3D models from satellite imagery.

20 If we turn to the next slide, this shows the
21 reconstruction of a facility from multiple satellite images,
22 including 3D building roofs and the full building itself, as
23 well as roadways and then planar parking areas. This
24 reconstruction was done by manually adjusting and positioning
25 points in multiple images to create the 3D model. And even

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1 gable roofs were created by this tool which we see in the
2 lower right. So, I think we can say at this point the
3 technology for creating building roofs was well in hand.

4 Next. I thought I would just explain a little bit
5 about the underlying nature of the 3D models because we are
6 going to be hearing the term "wire frame" quite a bit and I
7 thought it would be good to know what that is. A wire frame
8 is a set of 3D points joined by line segments. In fact, we
9 could think of those line segments as wires and thus the term
10 "wire frame."

11 The faces of the model, the planar surfaces are not
12 explicitly represented, and, therefore, we sort of can look
13 through the model and see the back of it. In fact, if you
14 look at it, you may perceive the back vertex is actually
15 sticking out towards you in the image because you're losing
16 kind of the 3D cues that you normally use to visualize a 3D
17 object because the faces are transparent.

18 And a way of representing the model which gives a
19 better 3D display capability is the mesh model where the
20 planar faces are filled in with an opaque plane surface, and
21 it gives a much more 3D look.

22 Now, you will see, also, in the patent specification
23 reference to a reference grid. A reference grid is nothing
24 more than a set of 3D points wherein you can -- or 3D cells
25 wherein you can locate the 3D vertices of the wire frame, and

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1 I've shown that here by embedding the wire frame into a
2 reference grid. Now, obviously we can make these cells as
3 small as we wish, and in the limit, they can become continuous
4 3D values, but this is the reference grid that's referred to
5 in the specification.

6 Next slide, please. I'm going to show now a tool that
7 we developed at Brown University in and around 2005 which is
8 pretty much a copy of the radius system that I showed earlier.
9 Since I understood the underlying software algorithms and so
10 forth of the radius common development environment, I decided
11 at Brown I needed a similar tool, and the radius system by
12 that time was not available. So, I'm just going to show the
13 operation of the system here which is very similar to that of
14 the radius system.

15 What I'm going to do here with this building which, by
16 the way, is in San Diego and these are satellite images that
17 you're looking at, I'm going to construct a top roof surface
18 of the building, and that will appear in the second image, but
19 it's not at the correct elevation, so I'm going to move the
20 roof vertically, which doesn't change its location in the
21 first image, but I'm moving along the epipolar line here and
22 lining up the points of the top polygon with the actual
23 location in the second image.

24 The next thing I'm going to do is extrude that polygon
25 to the ground, and here you see two wire frame projections,

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1 one in the first image and one in the second image. And they
2 are simultaneously being adjusted to form the building. Once
3 that's done, we actually have the 3D geometry of the building
4 which I am portraying here in the video. So, that's how the
5 radius system worked and my copy of it worked essentially the
6 same way.

7 Now, here is an approach to modeling which isn't
8 described in the patent, but I thought I would just show it as
9 a contrast of what wouldn't be covered, at least by the
10 description in the specification, and this is called
11 constraint-based modeling where one already has a 3D model
12 prepared ahead of time in the form of a primitive like this,
13 but there's some unknown parameters, such as the center
14 location and the height and width of the object, but we can
15 determine those parameters by looking at an image.

16 Here we've moved the center of that parametric object
17 to line up with its center in the image and then we can adjust
18 its orientation to be parallel to the ground, which it should
19 be, and then in the next step, we can rotate it so that it
20 lines up with the projection in the overhead image, and -- but
21 the size isn't quite correct. We can adjust its size then.
22 And now we know practically everything about the object except
23 its vertical position and its vertical height.

24 So, here we see the radius system doing exactly the
25 same procedure that I just outlined. If we go to just the

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1 third row before the bottom, we have gotten to the point where
2 it's lined up in the first image as well as possible, but its
3 vertical position is incorrect and its height is incorrect,
4 and by using the second image, we learn those two parameters
5 and complete the model. This is so-called constraint-based
6 modeling.

7 Next slide, please. So, now we come to what does all
8 this have to do with roof models. Obviously if we can
9 reconstruct 3D geometry from multiple images, a roof would not
10 be a challenge.

11 Next slide. I think Professor Bajaj covered this
12 economic aspect very well in his presentation, so I won't
13 belabor it, but you can see that if you know the dimensions of
14 the roof, it is not difficult to compute the cost of repair or
15 replacement. So, this then comes back to the patent
16 specification where again we are using the principles of
17 photogrammetry, which I hope I have explained now, to obtain
18 the geometry of the roof.

19 Next slide, please. So, let's just go through the
20 steps. First step is to select an image point in the first
21 image and that forms a ray. Then we select the same point in
22 the other image. That defines a second ray. And thus we get
23 the first point. And then we construct a second point and
24 join them with a line segment. This is exactly what's
25 described in the specification as to how we form a first edge

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1 of the roof model.

2 Next slide, please. We also have heard earlier about
3 pitch determination, and actually the specification goes at
4 quite length in describing how pitch is to be determined, and
5 it's to be determined using a pitch determination marker or an
6 envelope tool. I am going to describe here only the pitch
7 determination marker, but the envelope tool has a similar
8 concept.

9 So, as we can see here in the figure from the patent,
10 the pitch determination marker has four arms. Three of the
11 arms are just the X, Y and Z coordinates of the scene that we
12 are working with, and the fourth arm, so-called protractor
13 arm, is going to measure the angle of the pitch, and I'll
14 explain next how that's done.

15 Here we have two views of a building, and in the top
16 view we see the X and Y axes and the Z axis. Since we're
17 looking vertically straight down, the Z axis is just a point.
18 From the side, though, we can see the X, Y and Z axes in sort
19 of a perspective view, and what the operator does is they move
20 the protractor arm so that it lines up precisely with the edge
21 of the roof. That angle then, we would hope, would be the
22 pitch of the roof, but since we are looking at the building
23 sort of obliquely, that angle is not quite yet the pitch. We
24 have to take into account the fact that we're looking from
25 above. If you look to the right of the figure, you can see

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1 that we are not looking straight on at the end of the roof,
2 but looking sort of down obliquely at an angle θ that I've
3 indicated there. So, in order to compensate for that oblique
4 view, we have to divide the angle observed by the protractor
5 arm by the cosign of θ in order to get the actual pitch.

6 The specification goes on to say then that this pitch,
7 once determined, is communicated to the 3D model. And I'm
8 going to show that here in an animation. We first measure the
9 pitch using the protractor tool. It then informs the model.
10 The model then adjusts the pitch of the roof to match the
11 angle that was determined. And this is what the patent
12 suggests is the way that pitch should be determined.

13 That I believe completes what I had to say, and I hope
14 it was helpful in understanding the terms.

15 THE COURT: Thank you.

16 MR. BROMBERG: Your Honor, I just have a question or
17 two for Dr. Mundy.

18 THE COURT: Sure.

19 BY MR. BROMBERG:

20 Q. Dr. Mundy, on your slide 33, if you go back to that one
21 for a second, you showed how we came up with one line segment.
22 How do you do the rest of the roof, sir?

23 A. You follow the same steps that we just did here,
24 selecting a third point in both images, reconstructing the
25 corresponding 3D point, and then joining a line segment to

1 that, to the line -- to the other vertex. We keep going until
2 we've outlined all of the sides of the roof.

3 Q. And how many points do you need to use to determine -- to
4 get the whole roof done?

5 A. Well, for this particular roof here, there might be 10 or
6 12 points needed to be selected in this way. So, the operator
7 can do that relatively quickly. They just sort of click in
8 both images, you've got one point, you click in both images,
9 and within a minute or two, you could construct all the line
10 segments needed to form this roof.

11 MR. BROMBERG: Thank you. That's all I have.

12 THE WITNESS: Thank you.

13 THE COURT: All right. Do you want to start in on
14 the terms now?

15 MR. BROMBERG: Yes, your Honor. As Mr. Alper said,
16 your Honor, we agreed to, first one side will start, then the
17 other side will start, so I think we're up to bat on this
18 first term, which is "correlate."

19 THE COURT: "Correlate?"

20 MR. BROMBERG: "Correlate," yes. And we heard a
21 little bit about "correlate" already, your Honor, and, of
22 course, when we're looking at patents, as the Court knows, the
23 terms are construed based upon the claim language, the
24 specification, sometimes the prosecution history comes into
25 it, sometimes the prior art comes into it, but that's the

1 so-called intrinsic evidence which forms the basics for
2 construing claim terms.

3 And on the "correlate" term, the terms that we are
4 construing are correlating the first aerial image with the
5 second aerial image, correlating two of the two or more images
6 by registering the pairs of points, so the defendants'
7 construction is that for each reference point on an object,
8 and we just heard Dr. Mundy explain there might be 10 or 12 on
9 that roof that he talked about, for each reference point on an
10 object, registering a pair of points that includes a first
11 point identified in the first aerial image and a second point
12 identified in the second aerial image, and we believe that
13 that is the correct construction of "correlate."

14 Of course, your Honor, "correlate" is a term that can
15 mean all kinds of things. We could say that I've correlated
16 my presentation with Dr. Mundy's presentation or vice versa.
17 That's a form of correlation. But, of course, that's not what
18 the patent is talking about when it uses that term
19 "correlate." It's talking about something that is very
20 specific, and the meaning is supposed to be what that would
21 mean to a person of ordinary skill in the art, someone who
22 knows photogrammetry.

23 So, those are the basic principles, and in order to get
24 there, we first look at claim 1 and we see the phrase there
25 "correlate the first aerial image with the second aerial

1 image." Well, how do we know that it has the meaning that the
2 defendants ascribe? Well, first we can look at the context of
3 the claim language in the next slide, and we see that the
4 claim requires a specific order. First, receive a first and a
5 second aerial image, and in this patent, it's specified there
6 in the italic text that you've got to have one image that's
7 top down and one image that's oblique. That's fundamental to
8 this patent, your Honor, and that language is in italics
9 because it went through a reexamination procedure that the
10 plaintiffs themselves invoked. So, the patent first came out
11 and then they went back to have it re-examined and they were
12 obligated to make these amendments that we see in italics in
13 order to obtain allowance of the patent.

14 So, the first thing is you receive a first and a second
15 aerial image. Then the next step is correlate the first
16 aerial image with the second aerial image, and then generate a
17 three-dimensional model of the roof based on the correlation
18 between the first and second aerial images. And, your Honor,
19 excuse me for belaboring this, but, of course, the whole
20 principle of photogrammetry is to get you from two-dimensional
21 images, as Dr. Bajaj suggested, images are just
22 two-dimensional, photographs, drawings, what have you, they're
23 in two dimensions, they have representations of
24 three-dimensional objects in them, but we all walk around in a
25 3D world and we know that. So, when we're looking at an image

1 of a building, we understand that it has -- oh, yes, excuse
2 me, your Honor, Mr. Christie is going to hand up our slides
3 and also give, provide them to your clerk.

4 THE COURT: While he's doing that, I just want to go
5 back to make sure I understand something. Plaintiff, of
6 course, says the correlate is pretty obvious and unambiguous,
7 but they have a fallback position. And I read your briefs,
8 and I get the sense from page 8 of your opening brief and page
9 2 of your responsive brief, that because you contest that, I
10 am not permitted to say and to conclude that they're right,
11 it's unambiguous, simply because you have contested that. Is
12 that what you are saying?

13 MR. BROMBERG: I believe the law says, your Honor, if
14 there is a dispute, that the Court should construe the claim.

15 THE COURT: Why can't I construe it by saying they're
16 right, it's unambiguous?

17 MR. BROMBERG: I think you have that choice, your
18 Honor, but here's the problem, and the whole purpose of the
19 *Markman* proceeding and the claim construction as delineated by
20 the Supreme Court and the Federal Circuit is that ultimately
21 this question goes to a jury. So, is the jury going to be
22 scratching their head about what "correlate" means? And the
23 plaintiffs will say, yeah, you can just take a feature, you
24 can take the chimney on this one and the chimney on that one
25 and you're done, but, of course, we know if we read the

1 patent, the chimney here and the chimney there will not give
2 you the 3D dimensions of that roof. You have to go to the
3 reference points, you have to go to the --

4 THE COURT: You need to correlate more things than
5 one, is really what they're saying, isn't it?

6 MR. BROMBERG: I think it's more than just more
7 things than one, your Honor. It's talking about the specific
8 meaning of this term to a person of skill in the art, someone
9 who knows photogrammetry.

10 THE COURT: Dr. Mundy, all these examples, historical
11 examples that he gave, they were all correlations, weren't
12 they? That's how it always worked.

13 MR. BROMBERG: I don't understand what you mean, your
14 Honor.

15 THE COURT: Going back in history, trying to
16 determine from 2D images what measurements would be in 3D
17 involves correlating different points, correct? Isn't that
18 how we have always done it through history?

19 MR. BROMBERG: That's true, your Honor.

20 THE COURT: So, why wouldn't a person in the
21 industry, skilled in the art, know that when they read this?

22 MR. BROMBERG: Well, the problem is that it's the
23 Court's job to instruct the jury, a jury of lay people, what
24 the term "correlate" means to a person of skill in the art,
25 and that term has a specific meaning, as your Honor just

1 pointed out. Going back to that 1702 display with the table
2 that you are moving around to determine how far an object is,
3 they used the triangulation and then subsequently they used
4 the epipolar geometry as shown in the Finsterwalder paper so
5 that they were able to determine precise measurements of
6 objects in 3D based upon these 2D images.

7 So the correlation there would have to be understood to
8 mean that you are taking a point in one image and a point in
9 the other image and you are registering those two points, in
10 other words, you are recording where they are in space in some
11 way. In the Eighteenth Century, of course, you wrote it down.
12 In the Twentieth Century, you can do it on a computer, same
13 thing. You still have to be able to determine, using your
14 triangulation, where is the 3D point so that you can get from
15 the two dimensions to the third dimension. And I think that a
16 person of skill in the art would understand that "correlate"
17 term to mean you have to be precise, you have to do it point
18 by point.

19 And so I agree with your Honor that that is the way it
20 has been done. That's the way it's developed historically,
21 and employing triangulation and then epipolar geometry, which
22 came a little bit later, so that you could figure out how to
23 go from one image to a second image and find the 3D
24 coordinates of the same point in both images. So, you do have
25 to do it a point at a time.

1 And we believe also, your Honor, that the patent makes
2 it clear that you've got to register these points, which means
3 you are doing this on a computer. We all know that computers
4 work by you store data in memory and then you retrieve that
5 data in order to apply it to an issue like this.

6 THE COURT: Isn't another way of saying you correlate
7 one datapoint with what you've got in your memory? Isn't that
8 what computers do? Isn't that how LexisNexis works and
9 Westlaw? Isn't that how word searches work? It's
10 correlation, isn't it?

11 MR. BROMBERG: Well, your Honor, it's a specific kind
12 of correlation in the context of photogrammetry. I don't
13 think it's the same as a LexisNexis search or a Google search.

14 THE COURT: I'm not suggesting it's exactly the same,
15 but the concept is. You are correlating, comparing a
16 datapoint with what other data you have in your memory
17 somehow. Isn't that how it works? Isn't that how computers
18 work?

19 MR. BROMBERG: I think, your Honor, that this
20 process, of course, happened before computers in a great deal
21 of detail as Dr. Mundy explained, and what we have here is a
22 correlation that is specifically based on correlating one
23 point to another point, and again here we're in the 2D world,
24 and now we're trying to find the third point. So, the third
25 point is another step, and the claim makes that explicit. It

1 says generate, at least in part, based upon the correlation of
2 these two points, a 3D model.

3 And so going from the 2D world to the 3D world, which
4 is the whole point of photogrammetry, no pun intended, is what
5 you are trying to do, and if you can accurately depict the 3D
6 point of intersection of those two lines and then you repeat
7 that process for each point in the -- each reference point you
8 need, as Dr. Mundy displayed, you took one end of a gable and
9 then the other end, those two end points, and so you had two
10 sets of points, one in one, one in the other, one in one, one
11 in the other, by the time you had done, you had correlated
12 both of those points, you were then able to put in a line
13 segment that joined those two points and you were on your way
14 to doing your outline.

15 So, we submit that the "correlate" term needs to have
16 that clear understanding that it is a correlation process and
17 that the Court should spell it out for the benefit of the
18 proceedings and for the benefit of the jury, when, as and if
19 we get to a jury, to make it clear that they do not say, well,
20 you know, I correlate my wallet with my pocket or something
21 like that. It's a vague and amorphous term, but in this
22 patent it has very specific meaning to a person of skill in
23 the art, and, indeed, I think that Dr. Mundy's presentation
24 makes that clear.

25 Now, there was some exception, perhaps, taken in Dr.

1 Bajaj's presentation, but we submit that Dr. Bajaj's
2 declaration submitted in this case, which was a rebuttal, is
3 entitled to very little, if any, weight simply because we are
4 not objecting to his expertise, but what he said when asked at
5 deposition whether correlating a corresponding feature could
6 be based on color -- and if we could have, this is one of our
7 slides -- he said, "Well, I was not asked to, you know, dwell
8 on hypotheticals. The fact that it's an English term, and in
9 some sense, you know, it could be ambiguous."

10 So, that's exactly the problem, your Honor, in the
11 context of this patent, it is not ambiguous. Dr. Bajaj thinks
12 it's ambiguous. We need a clear definition of that term as a
13 matter of law to proceed with the case, both infringement
14 assessments, invalidity assessments, and assessments of
15 patentability under Section 101. All those things depend upon
16 a clear understanding of that term.

17 So, where Dr. Bajaj says, gee, it could be ambiguous,
18 that we think is a clear flag that the "correlate" term should
19 be defined by the Court and we suggest that it means as we say
20 for each reference point on an object registering a pair of
21 points, including one in one image, one in the other image,
22 and we think that that would make it clear what the definition
23 would mean to a person of skill in the art.

24 THE COURT: Thank you.

25 MR. BROMBERG: Thank you, your Honor.

1 THE COURT: Who is going to respond?

2 MR. DeVRIES: Your Honor, I will, Mike DeVries on
3 behalf of' the plaintiff.

4 THE COURT: Who will respond?

5 MR. DeVRIES: Your Honor, I will. Mike DeVries on
6 behalf of the plaintiff.

7 THE COURT: Go ahead, please.

8 MR. DeVRIES: Thank you, your Honor.

9 Again, my name is Mike DeVries. I'm on behalf of the
10 plaintiff.

11 Your Honor, there is a primary and very important issue
12 to be decided in connection with this term. And I'd like to
13 explain what that is. It's whether your Honor should define
14 the word "correlating" to exclude an example of correlating,
15 of a type of correlating that's described in the specification
16 based almost exclusively on extrinsic evidence about what
17 supposedly was done in other contexts over the last couple
18 hundred years. They are asking your Honor to limit the
19 claimed correlation to only one type described in the patent,
20 which is correlating points. And they want you to limit that
21 definition so it doesn't include another type of correlation
22 that is defined and described in the specification, that is
23 correlation of linear features, and doing that would violate
24 black letter claim construction law, your Honor. And I would
25 like to explain to you why.

1 Very briefly, I'd like to show your Honor the key parts
2 of the '436 patent that relate to this issue. I will skip
3 over the general aspects, your Honor, because we've already
4 talked about them. But, as your Honor knows, this patent
5 relates to a system, a technology for estimating roof areas.

6 And what the patent -- and I'm looking at Slide 13.
7 What the patent describes is using aerial images, and the
8 claims actually talk about specific types in several respects
9 of aerial images that are used, and then conducting an image
10 analysis that's also described in the patent.

11 And then now I'm showing your Honor the key part, and I
12 was surprised to not see this referenced at all in the
13 defendants' presentation. But the patent describes what
14 correlation means in the context of the patent. This is from
15 Column 8, which we believe is the critical portion of the
16 specification that relates to this.

17 And the patent describes, as I'm showing here, that
18 correlation between at least two of the aerial images
19 involves, for example, the roof modeling engine receiving an
20 indication of a corresponding feature, that's the keyword,
21 your Honor, corresponding feature that is shown in each of the
22 two aerial images. And it goes on to describe, in the portion
23 that I've highlighted in the bottom in red and blue, some
24 examples of the corresponding images -- I'm sorry,
25 corresponding features in the images that can be correlated.

1 If we look at Slide 15, this is the first type that
2 they talked all about. This is only kind of correlation that
3 you heard about from them. It says, the patent says in the
4 intrinsic evidence, which should be guiding our analysis, of
5 course, that the corresponding feature may be, for example, a
6 vertex of the roof of the building where these two line
7 segments meet, the point where the two line segments meet; the
8 corner of one of the roof planes, another point; and a point
9 of a gable or hip of the roof, et cetera. Those are examples
10 of the type of corresponding features that can be correlated.

11 But this is the part that's very key, your Honor, and
12 that if you were to provide them the construction that they
13 ask for, you would exclude this embodiment and that would be
14 inconsistent with the law.

15 So the patent goes on to describe that corresponding
16 feature may also be a linear feature. And a linear feature is
17 a line feature. And points are very different than lines. A
18 point has no height, width, or length. It has no dimension.
19 It is simply a point in an area in a two-dimensional surface,
20 it is a location there.

21 A line is very distinct. It's a distinct mathematical
22 concept. Unlike a point that has zero dimensions, a line has
23 one. And the patent says that the corresponding feature,
24 referring back to what may be correlated in the images, may
25 also, also meaning in addition, be a linear feature. And they

1 give examples, a ridge or valley lines between two planes of
2 the roof. And I'm illustrating that here.

3 And if you look at Slide 17, it's again showing that
4 what the patent describes as features in the images that can
5 be correlated, again can be points, we don't dispute it can be
6 points, but it can alternatively, or to use the patent terms,
7 may also be a linear feature, the lines that we're showing on
8 the right-hand side.

9 And so I'm going to skip forward then all the way up to
10 what is the issue, Slide 21. The primary issue, as I said, is
11 whether correlating should be limited to correlating points, a
12 pair of points, and should exclude linear features.

13 And then there's a secondary point, which I'm going to
14 spend less time on, your Honor, and that is whether you must
15 correlate each reference point of an object, which is a
16 term -- a phrase that, as you heard from their expert, even
17 when asked about his own example how many points you would
18 need to register, he couldn't tell you, maybe it's ten, maybe
19 it's 12, they don't know. And so that's an ambiguous phrase
20 that also does not have any place in the construction.

21 And so I want to just head on to something your Honor
22 asked, which is does this need a construction? We think that
23 the phrase is unambiguous and there's not a reason to restrict
24 it. The law is clear, and I think that counsel for defendants
25 agrees, that there is not a requirement that you construe the

1 claim when the phrase is ambiguous. But I want to say that we
2 are fine construing the phrase to provide some additional
3 detail about its meaning within the context of the
4 extrinsic -- intrinsic evidence, sorry, as long as it provides
5 the full scope of that description.

6 So our alternative construction comes exactly from the
7 patent in the place -- in the specification at Column 8 where
8 it most broadly describes correlation. And I've shown that
9 correspondence here on Slide 24. The patent says that, as an
10 example of correlation, the roof modelling engine receives an
11 indication of a corresponding feature that is shown in each of
12 the two aerial images. Our alternative construction captures
13 that breadth by referring to a corresponding feature.

14 In contrast, this takes us back to the key point, the
15 defendants want to limit the type of correlation to
16 registering a pair of points. Okay? And there's several
17 reasons why that's wrong. One of them, which I haven't talked
18 about yet, is there's the dependent claim. And this dependent
19 Claim 37, which I've showed here, specifies correlation of a
20 particular type. It says, correlating two of the two or more
21 images by registering the pair of points. That's language
22 that doesn't appear in the claims that we're talking about
23 today, Claims 1 and Claims 18, they simply say correlating.
24 And so they're asking your Honor to restrict correlation to a
25 particular type, namely, by registering a pair of points

1 that's found in the dependent claim. And the law is clear
2 that in a circumstance like this where the patentee has
3 specifically omitted language that it knows how to use, that
4 that certainly strongly suggests that adding in that
5 additional restriction would be improper.

6 But, more importantly, if you look at what they're
7 relying on to restrict correlation to just points, they look
8 at permissive language in examples. If you look at their
9 slides, this is the same thing that they're looking at. It
10 says in some embodiments correlating the aerial images may
11 include registering the pair of points. They're not saying in
12 this invention this is what you have to do, they're saying
13 this is what you may do. And we don't contest that that is
14 one way of correlating that is captured by the claims. But
15 the law, as I've shown on Slide 28, is clear, that the -- that
16 you're not supposed to import examples from the specifications
17 into the claims generally.

18 And then more important, and I'll be just as brief
19 here, your Honor, because it's the same point I made before,
20 by restricting the claimed correlation to points, they are
21 excluding lines, linear features. And Column 8, Lines 22 to
22 36, and specifically Lines 34 through 36, give as an example
23 of a type of feature and images that can be correlated, linear
24 features, and there is absolutely no basis to exclude that
25 embodiment from the construction. And I'm showing that on

1 Slide 30. Their construction would include the example on the
2 left, the points, and exclude the example on the right, the
3 lines.

4 So there's a couple of other things that relate to this
5 that I haven't talked about that I would like to share with
6 your Honor.

7 The first is in order to make their arguments, they
8 have to mischaracterize the specification. So this is from
9 the respondents -- I'm sorry, the defendants' responsive
10 brief, and they say that there is "the embodiment" disclosed
11 in the specification. They suggest that there's only one
12 description, one embodiment of correlating in the
13 specification of the patent.

14 And that's not right, your Honor. There's multiple,
15 and I'm showing it again here, and I won't belabor the point,
16 but there are multiple ways of correlating, multiple types of
17 features that may be correlated that the patent describes.

18 And then let's look to see what Dr. Mundy says, because
19 they rely very heavily on Dr. Mundy's description about what
20 has happened and the way things could be done and, based on
21 that, ask your Honor to restrict this term to only a
22 particular type of correlation.

23 So he was asked in his deposition, your Honor, in what
24 I think is the key testimony:

25 QUESTION: So you're saying that in the context of

1 the claims of the '436 patent the operator cannot correlate
2 linear features?

3 ANSWER: Correct.

4 He is literally saying that they are interpreting these
5 claims to restrict correlating linear features.

6 And then he was asked:

7 QUESTION: You understand that the patent says that
8 the corresponding features that may be correlated include
9 linear features, right?

10 ANSWER: Sure, I saw that.

11 And we all saw that, that is what the patent says. And
12 so in order to take their position, you'd need to exclude from
13 the scope of the claims an embodiment that everyone
14 acknowledges is described in the patent.

15 And then let's ask ourselves what Dr. Mundy didn't say.
16 Did he say that it would be impossible to do correlation using
17 linear features? Absolutely not. There's a good reason he
18 didn't say that because that would be false. The patent
19 itself tells you that in addition to lots of other sources.
20 So he doesn't say you couldn't do it. And even if he did say,
21 well, I know the patent says you can do it but I don't think
22 it works, that's not a claim construction issue, that's some
23 other invalidity type of argument. But they're not making
24 that argument here. And so the extrinsic evidence doesn't
25 support what they're asking your Honor to do.

1 And at one point, I just want to take this head on,
2 they say, well, in their responsive brief, you know, linear
3 features are necessarily defined by their points. It's
4 actually not correct from a mathematical standpoint.

5 Lines, because a point is zero dimensional, it has no
6 dimension, a line is not merely a collection of points, it
7 would be an infinite collection because points do not have
8 dimensions, so lines and points are not the same. And we
9 don't even have to get that mathematical to understand that
10 that's a difference, the patent itself distinguishes linear
11 features from points when it says the corresponding feature
12 "may also be linear features."

13 But the point I wanted to make here is their expert
14 isn't even taking this position. Dr. Mundy, when asked about
15 this in his deposition, says, and I'm paraphrasing now to be
16 clear, yes, I am saying that you would exclude linear features
17 from the scope of the claims. And that's just not correct.
18 It is not correct as the law -- as the law that we cited in
19 our briefing makes clear, to exclude embodiments in a
20 situation like this where there is no disavowal, there is no
21 definition restricting it only to the particular type of
22 correlation.

23 And so I think that brings me to, I think, two final
24 points for your Honor.

25 The first is this. They want to in addition add a

1 requirement that correlation be performed for each referenced
2 point on an object, that's a different part of their proposed
3 construction. And it's problematic. It's ambiguous. It is
4 uncertain what it means, and I can show you in two slides why.

5 First, the claims don't talk about a reference point
6 that we're talking about, and the claims don't talk about an
7 object. But, more important, it's not clear what each
8 reference point refers to. And you'll remember this, because
9 by now we all do, when asked right now how many reference
10 points do you need for this one example that you put in your
11 tutorial, their expert wasn't even able to say maybe it's ten,
12 maybe it's 12. Introducing an ambiguous phrase into a
13 construction like that is just going to cause problems down
14 the road.

15 If you look at what he said in deposition, Dr. Mundy,
16 at Slide 37, he was asked:

17 QUESTION: How do you know which reference points on
18 an object to correlate?

19 And he says:

20 ANSWER: We come back to the first input, which is
21 the user, it's in the operator's brain, now I'm skipping, and
22 so it's up to them to decide.

23 I cannot imagine a more vague requirement that we would
24 add into claim than that.

25 And then if you look at their responsive brief at Page

1 8, it's not at all clear to me what they're saying. They're
2 saying, well, it's not that we're saying every reference
3 point, it just needs to be for each. Then they go on to
4 acknowledge that what they call the classic photogrammetric
5 method, which is something that we totally dispute that there
6 is such a method, requires only that a limited set of
7 corresponding points be registered. So they say, well, it's
8 less than all. But what's the answer to how many it needs to
9 be? Their expert said I guess a sufficient number to define
10 the geometry of the roof, but he wasn't even certain with his
11 own example what that number would be or should be. As the
12 law is clear, construing claims in a way that introduces
13 ambiguity is the antithesis of what the exercise should be in
14 claim construction.

15 And then, finally, although it wasn't really talked
16 about as part of their presentation, I did want to note this,
17 because in their responsive brief, they bring up a new
18 argument and it's in their slide so I thought they were going
19 to address it today.

20 They say that in the supplemental examination of the
21 patent, which we requested, that there was some kind of a
22 disclaimer. And I'd like to say two things about that, and
23 then I'll conclude.

24 The first is the disclaimer that they say occurred has
25 nothing to do with the dispute we're here to talk about. They

1 say that primitives were disclaimed. I'm going to explain in
2 a minute that we disagree with their characterization of what
3 happened. But putting that aside, we're here talking about
4 whether correlation should be restricted to points or whether
5 it should also involve, for example, linear features, and
6 whether or not primitives were or were not disclaimed is not
7 pertinent to that, it is irrelevant to this issue. But, more
8 importantly, or maybe as importantly, they are
9 mischaracterizing what happened during the prosecution, so I
10 wanted to show the Court two things.

11 This is what was actually said during prosecution. I
12 think they -- maybe I've got the paging wrong, but they filed
13 a corrected version of this I think to make sure the accurate
14 information was before the Court on this, but the patent owner
15 is talking about some -- the '749 patent, which was asserted
16 as prior art, and the patent owner says, distinguishes on the
17 correlating step, among others, and the patent owner says,
18 look, the '749 patent doesn't do the correlating in the
19 claims. Instead, the patent owner says, the '749 patent is
20 generally directed to modeling a three-dimensional scene by
21 manually overlaying entire primitive 3D objects on an image,
22 an image singular. And I want to show you why the patent
23 owner was saying that.

24 So this is Figure 2 from the patent, the '749 patent,
25 the one asserted as prior art, and, as you can see, what it is

1 describing is a process that can be performed on a single
2 image. This is a single image process that is being described
3 here. I've highlighted that the three-dimensional model in
4 the '749 patent can be constructed on top of one or more
5 images. And, as you can see in the description here, it's
6 showing a single image and putting a primitive on this. So
7 what's being described there is not correlation at all, it's
8 not disclaiming certainly linear feature correlation or
9 anything else, and so that argument is one that also doesn't
10 support them.

11 And so in conclusion, your Honor, we believe that your
12 Honor could construe this as plain and ordinary meaning, we
13 think it's unambiguous, but again, we believe that it's just
14 fine to provide a construction provided it doesn't necessarily
15 exclude embodiments in the patent.

16 Your Honor, I would be happy to answer any questions
17 you might have.

18 THE COURT: I don't have any questions.

19 MR. BROMBERG: Your Honor, may I respond briefly to
20 counsel's points?

21 THE COURT: Sure.

22 MR. CHRISTIE: Thank you.

23 We say in our brief, and it's a fact, your Honor, there
24 is one and only one embodiment displayed in the '436 patent.
25 They may say, oh, yeah, we can also do linear. But when you

1 look at the text, which is excluded from their slide, even at
2 the text at Column 8, it makes it clear that a basic
3 proposition of geometry is that a line segment is simply a
4 collection of points. And what you need to do to understand
5 the line segment is to identify and correlate the end points
6 and then you have a segment, just as Dr. Mundy explained.

7 There is no teaching of anything else in this patent,
8 you can read it from cover to cover, your Honor, and you will
9 not find another embodiment explicitly disclosed. They might
10 say, oh, yeah, you can use linear elements. But then if we
11 look at Column 8, the passage that was cited is the passage in
12 white, the corresponding features may be, for example, the
13 vertex of the roof of the building, the corner of one of the
14 roof planes or the roof, a point of a gable or hip, the
15 corresponding feature may also be a linear feature such as a
16 ridge or valley.

17 Then it goes on to say in one embodiment the indication
18 of a corresponding feature on the building includes
19 registration of a first point and a first aerial image and a
20 second point and a second aerial image, the first and second
21 points corresponding to substantially the same point on the
22 roof of the building.

23 So when it talks about linear components, it makes
24 clear that what it's talking about, again as we come back to
25 points, as Dr. Mundy said in this declaration and as he said

1 in his deposition, this patent does not tell you how to just
2 take linear features and correlate them, what it does tell you
3 is that you have to go back to the point by point
4 determination. You find the two end points for the linear
5 segment, you can then draw the segment, then you go on the
6 next one.

7 And counsel was really taking cheap shots at the expert
8 who was asked how many points do you need to identify in this
9 picture, and he said, well, it could be ten or 12. He would
10 be able to tell you precisely if he had a minute to count up
11 the points in the picture that define the components of the
12 roof structure. So we think that the reference to linear
13 features gets you right back to points.

14 And, furthermore, your Honor, there is up above in the
15 section from 22 to 32 again more explanation. In one
16 embodiment, again, the patent says in one embodiment or some
17 in some embodiments, but it only talks about one particular
18 embodiment, that's the only one it tells you how to do. In
19 one embodiment, generating such a model at least in part on a
20 correlation between at least two of the aerial images of the
21 building. For example, the roof modeling engine receives an
22 indication of a corresponding feature that is shown in each of
23 the two aerial images. In one embodiment, explaining what
24 that means, an operator viewing two or more images of the
25 building inputs an indication of at least some of the

1 indications, the indications identifying which points, which
2 points of the images correspond to each other for model
3 generation purposes.

4 So again, your Honor, the emphasis is all on
5 identifying points and registering those points.

6 Now counsel also said to you -- let's go back to the
7 slide presentation.

8 Counsel also said to you there's nothing about
9 reference points in this patent. Well, that's wrong, too.
10 Let's look at Slide No. 9. And this is from Column 6, Lines
11 56 to 67. Next, a set of reference points may be identified
12 in each of the images, further references to reference point.
13 So we didn't make this up out of thin air. We took the
14 description in the patent of the only embodiment that is
15 described and we used that to come up with what we believe is
16 an accurate construction of the term "correlate" that can be
17 used for further purposes in this case.

18 And again, down at the bottom of this passage you see
19 highlighted in yellow a sentence that will ring true from what
20 Dr. Mundy had to say. Repeating the process for all such
21 reference points allows the software to build a 3D structure
22 of the model. It doesn't tell you -- and, of course, earlier
23 on it says use of regular methods of triangulation, there are
24 various algorithms and photogrammetry that allow you to do
25 this, all of which is true and all of which we've seen is

1 historically already developed. But they don't say a single
2 word about how you would take linear segments and do
3 correlation using those.

4 I might add, your Honor, that there now is mathematics
5 to do that, but it's very complicated. This patent doesn't
6 tell you how to do that. So we think that it is correct that
7 there is one embodiment, despite the language suggesting there
8 might be more, that's just kind of the patent prosecutor's way
9 of protecting his flank in the event that someone comes up
10 with another way to do this, to try to do it.

11 So what the plaintiffs are doing here, your Honor, is
12 they are trying to stretch their patent beyond what their
13 claims specifically require to cover other ways to do the
14 reconstruction of 3D models, and we don't think that they
15 should be permitted to do so.

16 And on the question of whether correlation is -- okay.
17 So if you could put up Slide 11. This, Slide 11, your Honor,
18 shows the attempts during patent prosecution, during re-exam
19 of the plaintiffs to distinguish their patent over the prior
20 art. And they said we're not doing modelling of
21 three-dimensional scene by manually overlaying entire
22 primitive 3D objects on an image of the scene to determine the
23 initial dimensions, that's not what we're doing, we're doing
24 specific correlation of aerial images, roofs, et cetera. And
25 again, when you look at the patent, you'll see that the

1 correlation that they describe is the point by point
2 registration that we have proposed as the definition for that
3 term "correlate."

4 So on the question, your Honor, of the ambiguity of
5 that term, we believe that it has a clear meaning to a person
6 of skill in the art but that that clear meaning should be
7 found by this Court and presented as a matter of law as the
8 meaning of "correlate" so that we all know what we're talking
9 about in subsequent motions, depositions, expert reports, and
10 in the presentation to the jury, because a layperson certainly
11 won't know what "correlate" means in the context of
12 photogrammetry, but a person of skill in the art would
13 understand that it means the point by point registration that
14 we have proposed in our definition.

15 Thank you, your Honor.

16 THE COURT: Thank you.

17 MR. DeVRIES: Your Honor, may I briefly respond in
18 two minutes?

19 THE COURT: We'll be here for three days if we keep
20 this ping-pong game going. I don't think I need it.

21 MR. DeVRIES: Thank you, your Honor.

22 THE COURT: Let's go to the next one the, pitch
23 determination marker.

24 MR. ALPER: Your Honor, that remark will be leading
25 off of this one.

1 Okay. If we could go to Slide -- I'm going to start
2 off with Slide 48 of our slides, skipping some of the
3 background because we've had quite a bit of it at this point.

4 May I proceed, your Honor?

5 THE COURT: Sure. Please do.

6 MR. ALPER: Okay? So we were introduced to the -- so
7 what is pitch? Pitch is, we heard this in the background,
8 this is the angle, right, for the roof. So we know what that
9 is, we know that through input to the roof reports. The
10 question is how do you determine it? And that's what this
11 pitch determination marker is all about, it's how do you
12 determine the pitch for purposes of the invention.

13 And there are three embodiments shown in the patent of
14 what the pitch determination marker is. And there's going to
15 be a dispute about one of them, you probably kind of gathered
16 that from the introductory remarks.

17 I would like to by way of background talk about the
18 three embodiments briefly, then get into what the actual claim
19 construction disputes are.

20 So we're showing you on Slide 48 the three -- or three
21 of the embodiments, I should say, of the pitch determination
22 marker. Figure 5B shows what's called the protractor tool.
23 Figure 5D, as in dog, shows the envelope tool. And Figure 6C
24 shows the wire frame embodiment, which is also shown in Figure
25 7B.

1 Let me walk through these briefly. All of them are
2 going to be used to line up a graphical component with the
3 edges of the building overlaid on the edge of the building and
4 then make adjustments in order to indicate or determine pitch.

5 So if we go to Slide 49, this is what the patent calls
6 the protractor tool. You basically take the X and Y axis,
7 move them up to the lineup overlay with the edges of the
8 building, and then you use that dotted line, it's labeled 510D
9 in the Figure 5B, and you adjust it up and down so it lines up
10 with a sloped edge of the roof that then will be translated by
11 the system into a pitch.

12 That's the protractor tool.

13 If we go to Slide 50, we see the envelope tool
14 embodiment. This is a wire frame that you can have appear
15 over one of the aerial images in Figure 5C. And then in 5D
16 the user will bring it and arrange it, overlay it on -- adjust
17 it, rather, to overlay it on top of the roof in order to line
18 up with the edges and the slopes and that will further allow
19 the system to determine the pitch.

20 And then lastly you have the wire frame embodiments,
21 and this is on Slide 51. And again, this is a wire frame you
22 put right on top of the building, you make adjustments to it
23 by grabbing the lines and, as we saw from Dr. Bajaj, that will
24 determine pitch.

25 And we're going to see this specifically in the

1 specification, I want to spend some time on that in a moment.

2 So if we go to Slide 52, this is, you know, an
3 exemplary claim, we've sort of up-leveled the elements. As
4 you can see here, you display a graphical user interface,
5 which includes a pitch determination marker. You then move
6 the pitch determination marker through user input in order to
7 overlay it on top of the roof on an aerial image. You then
8 use -- that will determine the pitch. And in this particular
9 claim, you generate an output or roof report that includes the
10 pitch as one of the features in the roof report.

11 The two terms -- if we go to the next slide.

12 The two terms that are up for construction are pitch
13 determination marker and envelope tool. An envelope tool is a
14 species of pitch determination marker. As you'll see in a
15 moment, the claim construction disputes between the parties
16 are identical for both terms, and so we can handle them
17 together as a group.

18 Let's then take a look at Slide 54, which shows the
19 competing claim constructions between the parties.
20 Highlighted in green the areas of agreement and in red the
21 areas of disagreement.

22 We start off by saying no construction is necessary for
23 this term. I will show you why that is, because the term is
24 defined itself in the claim language. Then we go ahead and
25 say, well, if we want -- if a construction is required, here's

1 this construction. Let me tell you why we did that. We did
2 that because to focus the disputes. We looked at the
3 defendants' construction, we saw that there's a piece of it
4 that is what the claims say a pitch determination marker is.
5 We can -- in order to really show where the actual areas of
6 disagreement, we're fine with that as construction. That then
7 leaves us with the red parts, which don't belong in the
8 construction, and that's where we have disagreement, and I'll
9 spend some time talking about that.

10 But basically we say and the claims say that a pitch
11 determination marker is a graphical user interface component
12 that can be manipulated by the user to specify the pitch of a
13 section of the roof, and that's what it is.

14 They say that it is that, so they agree that it's that,
15 the defendants do, but then they have these additional
16 requirements. One is that the pitch determination marker
17 needs to be distinct from what they call the displayed model
18 of the roof. And then they also say that it doesn't just
19 specify the pitch of the roof, it specifies the pitch of roof
20 model, they count on that extra word "model." And I would
21 like to spend some time in a moment why those are
22 inappropriate additions to the construction for these terms.
23 Again, those disputes are the same between the two terms that
24 are up here, and so we can combine the issues.

25 Let me skip over 55 because I just basically covered it

1 a moment ago and go to 56. So where do we start? I want to
2 explain why our construction is correct first, and then we'll
3 talk about why those additions are incorrect.

4 Where do we start? You always start with the claim
5 language. Right? That's the primary place when you're
6 thinking about -- when you're talking about what claim terms
7 mean. And here it's a very simple story because the claim
8 language itself defines what a pitch determination marker is.
9 So if you look at what we've highlighted in green, it says a
10 pitch determination marker is an interactive user interface
11 control that can be manipulated by the operator in order to
12 specify pitch of the roof. And that's exactly the
13 construction that we're proposing.

14 And we have a situation like that where the claim is --
15 the meaning of the term is clear from the claim language,
16 actually it's even more than clear, it's defined by the claim
17 language, then that's the end of the story.

18 Now, as I've indicated on this slide, the pitch
19 determination marker term is used in the remainder of the
20 claim, it tells you that it can moved, it tells it can be
21 adjusted, these are things that you can go with the pitch
22 determination marker. But as far as the inquiry as to what a
23 pitch determination marker is, which is the inquiry that's
24 before the Court when it comes to construing that term, the
25 claim language tells us what it is and that's it. And that's

1 what why we've -- how we've chosen our construction.

2 If we go to Slide 57, this just showing you in one of
3 the other independent claims that the term appears and
4 essentially says the same thing here, it's operable to
5 indicate pitch of a plane or roof section. Again, operable by
6 a user that can manipulate it to indicate pitch for a section
7 of the roof.

8 So if we go to Slide 58, how does this line up with the
9 parties' constructions? Well, ours comes from the claim
10 language itself because the claim language tells us what a
11 pitch determination marker is, it is identical to the claim
12 language. That's why we said, by the way, your Honor, we
13 don't think that a construction is necessary because it's
14 already in the claims. But if you're going to have a
15 construction, we should use the definition that's in the
16 claims.

17 And then you compare that to the defendants'
18 construction, which has this addition that the pitch
19 determination marker be distinct from the displayed model of
20 the roof. And I will tell you that that aspect of their
21 construction is not found anywhere, it's not found in the
22 claims and it's not found in the specification, and it doesn't
23 belong, certainly does not belong as part of the definition of
24 what a pitch determination marker is.

25 So let's -- before we get into the specification,

1 because I'm going to address their construction specifically
2 in connection with the specification, let's see where this
3 leads us. And there's some very important legal principles
4 that I think come into play here.

5 So if you go to the next slide, 59. The federal
6 circuit is very clear, this is an undisputed aspect of the
7 law, and that is when the claim language is clear, you only
8 modify it, right, you only add things into it in two
9 circumstances. One is when the patentee accesses its own
10 lexicographer, and that means -- we have some of the law right
11 here on this Slide 59. The patentee clearly sets forth a
12 definition for the term elsewhere, like, for instance, in the
13 specification, in other words, pitch determination marker
14 herein shall mean something. And the other instance when you
15 can change the clear meaning of the claims is when there is
16 what they call a clear disavowal of the claim scope. So, for
17 instance, you have a disclaimer during the prosecution history
18 in order to get over prior art.

19 The thing about it here is that in this instance
20 everyone agrees neither of those two things are present. So
21 what that leaves us with is a definition of what a pitch
22 determination marker is in the specification, and the only two
23 ways that the law allows us to modify that are absent, and no
24 one disputes that.

25 Okay. But the evidence -- there's more. So the

1 evidence is consistent across the board. So if we go to Slide
2 60, if you look at the embodiment -- I'm going to walk you
3 through all three -- not all three, three of the forms of
4 embodiments that I showed you on that initial slide or the
5 examples that I showed on that initial slide.

6 Here's the protractor tool in Figure 5B. And when you
7 look at the corresponding text in the specification that
8 describes it, it says the pitch determination marker in 510,
9 that's that protractor arm in -- or protractor tool in 5B, is
10 an interactive user interface control that can be directly
11 manipulated by the operator order to specify the pitch.
12 That's our construction.

13 Now we go to Slide 61, the envelope tool. Same thing.
14 It's described in Figure 5C, the envelope tool is described in
15 the specification, it says the pitch determination marker 520
16 is an envelope tool, is interactive user interface control
17 that can be directly manipulated by the operator in order to
18 specify pitch. Same thing. That's our construction.

19 What about the wire frame embodiment? Well, if you go
20 to Slide 62, here's Figure 6C. Figure 6C shows wire frame
21 612. And what does the specification say about that? It
22 says, wire frame 612 is an interactive user interface element
23 that the operator can make changes to the wire frame, make
24 refinements and adjust the wire frame. And just so there's no
25 doubt about it, what does the specification say you can do

1 with the wire frame 612 down at the bottom? You can do pitch
2 determination. And this is all in the description of Figure
3 6C, and, in particular, wire frame 612.

4 And we'll get to it in a moment, but you heard from
5 the -- from some of the introductory remarks that the wire
6 frame can't be a pitch determination marker. Well, the
7 specification, it says that it can.

8 And you know what, let's go look at it again and Figure
9 7B. Figure 7B, when it's describing Figure 7A through C,
10 including Figure 7B, the specification, there's a wire frame
11 710 -- I'm sorry. Let me back up. There's a wire frame 710
12 in Figure 7B, that's the wire frame in that figure, and when
13 the specification starts off describing 7A, B, and C, it says
14 these are illustrate techniques for reviewing various aspects
15 of the model, including reviewing roof pitch. And that wire
16 frame 710 can be used to manipulate -- to manipulate the wire
17 frame, change the pitch that you're reviewing. And that's all
18 in connection with Figure 7 and in particular 7B and wire
19 frame 710. Okay. So all of that, consistent with our
20 construction, supportive of our construction, which is based
21 on the claim language.

22 Now, let's go to Slide 64. So let's talk about this
23 first addition to plaintiff's construction that the pitch
24 determination marker be distinct from the displayed model of
25 the roof.

1 And the first question that we have to ask ourselves is
2 what is a displayed model of the roof? And once we get to
3 that, we can decide whether it's appropriate to limit the
4 claims to pitch determination markers that are distinct from
5 it. Right?

6 So if we go to the next slide, we're going to talk
7 about what a display model of the roof is, at least this is
8 what it is according to defendants. So you have a model of
9 the roof on the left side, this is just one of the conceptual
10 diagrams from the patents at issue, the '840 and the '376
11 patent, and then on the right side that's the displayed model
12 of the roof is the projection of the model graphically onto
13 the aerial image. And we'll see in a moment that the,
14 according to the defendants, the wire frames are the displayed
15 models of the roof. So when they say displayed model of the
16 roof, they mean the wire frame graphic user interfaces that
17 are on the -- in some of the figures.

18 And the first thing, before we even get to the distinct
19 from aspect of this, is it appropriate, the first question, is
20 it appropriate to include in the claims a requirement of the
21 displayed model of the roof? Because that's what they are
22 doing with their construction. And the answer is, if we go to
23 next slide, it isn't. There's no requirement in the
24 independent claims that are at issue with these claim
25 constructions the other displayed model of the roof.

1 And I want to point out a couple of important things
2 here because I think there's a potential for a
3 misunderstanding based on the defendants' briefing.

4 The defendants point to in a couple of the claims, I'll
5 show you here, for instance, Claim 1 of the '840 patent, an
6 element that talks about modifying a model of the roof.
7 That's talking about modifying a model of the roof, doesn't
8 say the displayed model of the roof or require a wire frame or
9 anything like that. So when they are now injecting into a
10 pitch determination marker a displayed model of the roof
11 requirement, that's something that's just not present in the
12 claim language, it's an additional reason to reject this
13 construction.

14 And we can see it again, by the way, on Slide 67.
15 Slide 67 talks about a roof report that includes various views
16 of a model of a roof, and that's not the displayed model of
17 the roof either. The displayed model of the roof, it's the
18 wire frame, it's what shows up on the screen. This is a roof
19 report that has generated an output on paper, right, or PDF,
20 which has what we're showing on the right, a number of figures
21 and diagrams, that's not the displayed model of the roof
22 either.

23 Okay. So now what about -- so already we know we
24 shouldn't put in the word "displayed model of the roof" into
25 the term. But let's assume -- assume that that's there.

1 Okay? There's another problem with their construction and
2 that is that the displayed model of the roof is distinct from
3 the pitch determination marker. And that's also inappropriate
4 because, as you'll see in a moment, it would exclude -- it
5 would restrict the claims, it would cause the claims to not
6 cover embodiments in the patents, and that going to be rarely,
7 and certainly in this case, not the right answer.

8 So if we go to Slide 68, this is a portion from
9 defendants' brief, and this is where they make the argument,
10 they say that a person of ordinary skill in the art would
11 understand the term pitch determination marker to mean a user
12 interface component distinct from the displayed model or wire
13 frame because they're equating those two things, the displayed
14 model to them is the wire frame. And when we compare that to
15 the wire frame embodiments in the patent, what we'll see is
16 that the wire frame embodiments in the patent actually are
17 used for pitch determination and are not distinct from the
18 pitch determination marker.

19 So if we go to Slide 69, I already walked your Honor
20 through this aspect of the specification. And it's, by the
21 way, for the record, it's Figure 6C, Item 612 in the '840
22 patent, Line 14. If we can advance the slide by one. And
23 this is it. It says that wire frame 612 can be manipulated by
24 the user. And right down there at the bottom it says that
25 wire frame 612 can be used for pitch determination. This is

1 all right in one portion of the specification describing
2 Figure 6C.

3 And we see it again -- I'll just quickly show your
4 Honor on Slide 70. This is a repeat of an earlier slide, we
5 saw it again for Figure 7B, it shows you the wire frame. And,
6 of course, this is the case, your Honor, we saw it, Dr. Bajaj
7 illustrated this, when you move one of lines on these wire
8 frames, that has a corresponding effect on the pitch, of
9 course, depending on which line you move. But you move one of
10 the lines, and there's no restriction on which line you can
11 move, that's going to adjust the pitch. Of course the wire
12 frames can be used to determine pitch, it says it explicitly
13 in the specification.

14 So you line that up with -- if we go to the next slide,
15 71 -- you line that up with defendants' construction, they say
16 that the pitch determination marker can't be used -- or can't
17 be a wire frame, rather, and yet the specification says it can
18 be. And what that would mean is that they are asking your
19 Honor to narrow the claim, to construe the claim in a manner
20 that would be inconsistent with the way that the inventors
21 describe their own invention, and that is never appropriate,
22 certainly not in these circumstances.

23 And we put a little clip from the *SynQor* case, the
24 Federal Circuit case, that's a well-established principle of
25 law.

1 Okay. If we go to Slide 72, your Honor, now a couple
2 of points that the defendants make here. They say the
3 portions of the specification that the plaintiff relies on
4 with respect wire frames, they're not about determining pitch,
5 they're about reviewing pitch. And you can see that, we've
6 put that on the left side here in yellow from defendants'
7 brief. And they further go on to say, in fact, the only
8 mention, and this is in the green part, the only mention of
9 pitch determination is in connection with Figures 5A through
10 D, the pitch determination marker, and -- I mean, the
11 protractor tool and the envelope tool, which are in this
12 Figure 5A through D figures. But when you look at the
13 specification, that is just not true. So this is in
14 connection -- this on the right side is from the '840 patent
15 at Line 15.

16 By the way, the specifications of the two patents that
17 are at issue here, the '840 patent the '376 patent, are the
18 same in relevant part, and so we have co-cites on our slides
19 here. But in the '840 patent, Column 15, Line 24, it's
20 talking about 7B, Figure 7B, that's one of the ones that has
21 the wire frame, and what does it say? Does it say that the
22 pitches in that figure are only reviewed? No, it says that
23 they are determined. And how are they determined? Well, it
24 says they can be determined based on the tools that are shown
25 in Figure 5A through 5D, like the protractor tool and the

1 envelope tool. Right? But then we've highlighted in green,
2 they say they also can be based on the wire frame models shown
3 in the Figure 6A through 6D, including Figure 6C, which is the
4 one we just looked at where the specification explicitly says
5 that wire frame 612 can be used to determine pitch.

6 So when you look at the actual intrinsic evidence and
7 you look at the actual specification with the actual figures,
8 we see unequivocally that wire frames can be used for
9 determining pitch and they are not distinct from the pitch
10 determination marker.

11 Okay. So where do they go when it comes to trying to
12 explain or reconcile this aspect of the specification with the
13 -- with the construction that they're proposing, and they get
14 into a little bit of expert testimony that I -- it's worth
15 showing, so this is on Slide 73.

16 This is some testimony from their expert. We asked
17 him, we asked him and we said, could you -- changing the
18 handles of wire frame 710, it's your opinion that that would
19 not result in a change in pitch. He says, correct, but that's
20 just not what the specification says.

21 The specification tells us that it can be used for
22 pitch determination, and this is what I was referring to
23 earlier, Your Honor, when we were talking about that
24 objection. We don't think you need to rely on expert
25 testimony at all in connection with these proceedings, because

1 the specification says -- has everything that we need to know,
2 to know that our construction is correct and defendants is
3 incorrect.

4 However, we definitely should not rely on expert
5 testimony that conflicts with the intrinsic evidence, and
6 that's another basic precept of claim construction.

7 And in fact -- and that's what we have on Slide 74, a
8 little bit of law on that. Your Honor is familiar with that.

9 And so what's the fallback for the expert when pressed
10 on this? We asked him in deposition, well, you know, more
11 about the wire frame. He said, when we asked him, well, would
12 one of ordinary skill in the art reading 57B conclude that
13 that is Item 710 and 7B is a wire frame? He said, no, that's
14 not even a wire frame. And so you can see what's going on
15 here. They literally have to deny the existence of the
16 intrinsic evidence in order to reconcile it with their
17 construction. Okay.

18 Couple of other quick points.

19 There's a claim differentiation -- well, defendants
20 cast as a claim differentiation argument in support of their
21 construction.

22 Claim 76 -- Slide 76 is a piece from the brief. Claim
23 differentiation, of course, that means that if there's a
24 requirement in a dependent claim, that you have -- there's a
25 presumption that that requirement is not present in the

1 independent claim because why would you be adding it into the
2 dependent claim? And that's not really an applicable
3 principle here.

4 So if we go to Slide 77, this argument relates to Claim
5 5 of the '840 Patent and Claim 5 of the '840 Patent adds an
6 element of displaying a wire frame rendering of the modified
7 model superimposed on the aerial image of the building.

8 We're not seeking to add that requirement into the
9 independent claim. We're just not. Our construction doesn't
10 add that at all, and so it's not really a claim
11 differentiation, or at least that principle doesn't apply
12 here.

13 If we're -- if I was to interpolate -- do a little bit
14 of interpolation as to what defendants mean by their claim
15 differentiation argument, it's that -- because I think what
16 their point is, that because Claim 5 talks about displaying a
17 wire frame, a wire frame of the modified model, that that
18 means that the pitch determination marker, which is an input
19 to the modified model, can't itself be a wire frame.

20 But if we go to the next slide, so they talk -- they
21 kind of set up sort of a sequence of the claims and they say,
22 well, because the ultimate output here is a modified wire
23 frame, that the input can't be a wire frame, but that's just
24 not the case at all. It's not consistent with the
25 specification. There's no requirements about that in the

1 claim language and it's just not a tenable position.

2 Of course, the pitch determination marker can be a wire
3 frame. There's nothing in the claim language that prevents
4 that. So the pitch determination marker is a wire frame, you
5 modify that wire frame, that allows a determination of pitch
6 to be made, that then allows for, in this particular claim,
7 Claim 1 of the '840 Patent, modified -- modifying a model.

8 So now we already have a model. This is a claim that
9 never requires modifying a model, and then from there, you're
10 going to display a wire frame rendering of the modified model,
11 and that's -- that's not only very clear from the claim
12 language, but it's also very clear in the specification.

13 We saw Figure 6C. You can make a modification to that
14 wire frame model that will then create a modification to the
15 underlying roof model, you will get a new display, not only on
16 6C, but in the specification describes 6B which is the other
17 views. We saw it in the tutorials, the alternative views of
18 the model will then all automatically change.

19 That's what's being discussed here in Claim 5. It's
20 certainly does not mean that the pitch determination marker
21 can't be a wire frame. In fact, we know that it can be,
22 because the specification says that it can be. In fact, the
23 specification says -- explicitly says it can be in 6C when you
24 are modifying the model, the wire frame, right? That's the
25 whole point of 6C is to allow you to use that wire frame to

1 modify the model and that's what's going on here. So that's
2 not supportive of their position.

3 Slide 79, they point to -- so you -- they talk a bit
4 about Figure 6B, and they say -- here's their argument about
5 6B. They say, all right, you see 6B has wire frame 611 in it,
6 and then it's also got this tool, you see that tool, 610.

7 And they say that's the drawing tool and that can be
8 used for pitch determination, and their point here is that
9 Figure 6B therefore shows a pitch determination marker
10 separate from a wire frame, and from that, they extrapolate,
11 therefore, that the wire frame must be distinct from the pitch
12 determination marker. And if that is a little bit hard to
13 follow, it really should be, because there are a lot of
14 premises built into that, none of -- many of which are
15 incorrect, and I'll just -- I have to respond to the argument
16 because they put it in their briefing.

17 But here's the issue: So first of all, regardless --
18 no matter what 6B shows, that doesn't take away 6B and 7C,
19 right? There are other embodiments that show a wire frame
20 being used for pitch determination. It doesn't matter what 6B
21 shows. If 6B did show a wire frame that's distinct from a
22 pitch determination marker, that's great. That's one
23 embodiment, but there are others that show a wire frame as the
24 pitch determination marker. Therefore, we know that we can't
25 say in the claims, as a matter of claim construction, that

1 those two things have to be for all purposes distinct. So
2 that's the first point.

3 And then the second point is, they're just wrong. This
4 tool, 610, the drawing tool, that's not a pitch determination
5 marker. It's not described that way in the specification.
6 It's the drawing tool. And the drawing tool is used to
7 outline the edge -- the edges of the building. It's not used
8 for pitch determination.

9 And if we go to the next slide, Slide 80, Your Honor,
10 you can see on the left-hand side, we have some specifications
11 -- portions in the specification, for instance, the '840
12 Patent, Column 14, Line 4, it describes the drawing tool. It
13 says it's an interactive user interface that can be used to
14 specify roof features, such as edges, ridges, valleys and
15 corners. That's not the protractor tool. That's not the
16 envelope tool, that's not the wire frames that are described
17 as doing pitch determinations.

18 So the premise of the argument that they make on 6B,
19 that it shows a distinction between a pitch determination tool
20 and a wire frame is incorrect, and in any event, it's
21 irrelevant because that's one of several embodiments and we
22 can't ignore the embodiments where the wire frame is the pitch
23 determination marker.

24 And then I just put on the slide here on the right
25 side, Your Honor, this is -- they rely on some testimony from

1 Dr. Bajaj, our expert, where he says that he doesn't -- that
2 the pitch determination marker is not illustrated in
3 Figure 6B. That's because it's illustrated in Figure 6C and
4 7B as a wire frame, and also Figure 5, the figure -- the 5's,
5 the Figure 5's with the envelope tool and the pitch
6 determination marker. Figure 6B is just irrelevant.

7 Okay. Let me go to this last -- I'm finishing up here,
8 Your Honor.

9 If we go to Slide 82, this will be my final slide.
10 Remember they had the two -- we have the two disputes on this
11 term. The last one is whether this tool -- or let me rephrase
12 that, whether the pitch determination marker needs to specify
13 the pitch of the section of the roof or a section of the roof
14 model. This is a really simple one.

15 The claims talk about it specifying the pitch of the
16 roof, not the roof model. And so, there's just no reason to
17 add the word "model," into the claims. They don't justify it
18 and that's just, you know, a basic principle. Why would we
19 inject something in the claims that's just not there?

20 Thank you, Your Honor

21 THE COURT: Thank you.

22 Counsel, we agree that -- will you agree, excuse me,
23 excuse me, that the wire frame can be used for pitch
24 determination?

25 MR. BROMBERG: No, Your Honor.

1 THE COURT: No. Under no circumstances, does this
2 patent provide that the wire frame can be used for pitch
3 determination?

4 MR. BROMBERG: No, it does not, Your Honor. And I
5 think what -- what counsel's argument, which is a very clever
6 and detailed argument overlooks is the fundamental proposition
7 that what we have here is, we've got a roof in the real world,
8 a 3D roof, and we're trying to determine what the pitch of
9 that roof is.

10 I mean, it goes section by section, but let's say, it's
11 just a simple roof. We're trying to determine what the pitch
12 of that roof is.

13 So -- and I think counsel's argument loses sight of the
14 fact that we are dealing in two-dimensional images with wire
15 frame models, projections of wire frame models that are not
16 actual wire frame models because they're not in 3D, they're in
17 2D.

18 So, we're translating between the world of
19 two-dimensions, which is the one we're stuck with, with aerial
20 images and three dimensions, which is the one we walk around
21 in. So when we look at a 2D image of a building, we know that
22 that building exists in 3D because that's the world we live
23 in. But how to translate between the two and that's where
24 this confusion comes.

25 THE COURT: Well, what am I to make of Figures 5B, 5D

1 and 6C then?

2 MR. BROMBERG: Okay. Well, I will address those,
3 Your Honor, very specifically. I think Figures 5 --

4 THE COURT: 5B is protractor tool.

5 MR. BROMBERG: Right.

6 THE COURT: 5B is envelope tool.

7 MR. BROMBERG: Right.

8 THE COURT: And 6C is the wire frame.

9 MR. BROMBERG: Right. So, Your Honor, for -- first
10 of all, there's no dispute about the protractor tool, the
11 envelope tool. We think those are pitch determination markers
12 and they are used in the patent in order to determine the
13 pitch of the roof, the real roof that exists in the real world
14 based upon the information that has been collected. So that
15 -- that's the key distinction.

16 But the wire frame is not -- there's no wire frame
17 embodiment of the pitch determination marker in this patent.
18 Can the wire frame -- does the wire frame display a pitch?
19 Yes, it does, and that is after that pitch has been determined
20 by the protractor tool or the envelope tool, as the case may
21 be.

22 And we again think, Your Honor, that this is a case of
23 plaintiffs trying to stretch their patent, they came up with a
24 protractor tool, they came up with an envelope tool. Now
25 they're going to say, well, any wire frame will meet the need.

1 But it does not, because the wire frame is not used to
2 determine the pitch based on the aerial images.

3 The wire frame is modified as Claim 1 states, based
4 upon the input from the pitch determination marker. You don't
5 start out with a wire frame and say, okay, let's put it on the
6 roof and see what the pitch is. That's not how it works, and
7 we're also looking, in fact, here, at a series of steps that
8 are performed in time to get you to your result.

9 So you can use the protractor tool to get pitch, as is
10 indicated in -- let me find the right slide here, Your Honor.

11 In our Slide 27 that my colleague has up on the board,
12 you can use the protractor tool to come up with the pitch, as
13 shown in Figure 5B. You can use the envelope tool to come up
14 with the pitch -- to determine the pitch as in Figure 5C, but
15 then when you get to Figure 7, which is what the plaintiffs
16 rely upon here, that is talking about -- this is in the
17 section of the patent called: Roof model review. You've
18 already determined the pitch based upon your protractor tool
19 or your envelope tool, and those -- those pitch determinations
20 have been put into the model, the wire frame model, so it's
21 modified to reflect those.

22 And now in Figure 7B, the first, as it says in the
23 patent, as shown in Figure 7B, the image portion includes a
24 wire frame that indicate pitches of corresponding sections of
25 Roof 407. Indicate pitches that were previously determined by

1 the protractor tool, the pitch determination marker.

2 And then it goes on to say that the illustrated pitches
3 are determined by the roof estimation system based on the
4 pitch determination described with respect to Figures 5A to
5 5D. Again, that is the protractor tool or the envelope tool,
6 not the wire frame.

7 So those two devices are used to make a determination
8 of the pitch of the real world roof object that you have out
9 there. And then the operator specification of the wire frame
10 model with respect to Figures 6A to 6D above, do not
11 illustrate any embodiment of a wire frame used as a pitch
12 determination marker.

13 They simply refer you back to the two devices that
14 we've talked about earlier, and Dr. Bajaj explicitly said, as
15 counsel said during his presentation, this is in his
16 declaration, Your Honor, which is on file with you: "Neither
17 the envelope tool nor any other embodiment of the pitch
18 determination marker is illustrated at all in Figure 6B."

19 And unquestionably, Figure 6B, as we see from the quote
20 -- from the '840 Patent in Column 14 and from the diagram that
21 we have up on the board there in our Slide 24, indisputably
22 Figure 6B shows a wire frame, but Dr. Bajaj says it's not a
23 pitch determination marker and he acknowledges in the next
24 slide, as he did at his deposition, that a wire frame model is
25 a form of a roof model in the context of this patent, but he

1 stands by his statement that 6B does not show a pitch
2 determination marker.

3 So that is explicitly excluding the wire frame from the
4 realm of pitch determination marker, and we believe, Your
5 Honor, that is consistent with the way the claim language
6 reads, the way the specification discusses this information.
7 The pitch determination marker is a distinct component and
8 there is no wire frame embodiment of the pitch determination
9 marker.

10 Now, if I may, I'll just address a couple of the
11 arguments that counsel made, and -- and again, we have to
12 think of this as a process in time where you're using your
13 pitch determination marker, either the protractor tool or the
14 envelope tool, to determine what is the pitch of the roof that
15 we see in the aerial images. Once you have that, then you
16 engage in roof model review, because you have adjusted your
17 model based upon what the pitch determination markers showed
18 you was there, and, of course, the model, being a 3D model,
19 but just an image of a 3D model in 2D, but it's a 3D model, it
20 has a pitch as determined by the pitch determination marker.

21 Then the operator can, by pulling on the handles,
22 adjust that pitch, but he is not thereby -- he or she is not
23 thereby determining the pitch of the real roof, but simply
24 manipulating the model for whatever reason to come up with a
25 different configuration by pulling on line segments or

1 removing a gable or expanding it and thereby changing pitch
2 determinations based on mathematics.

3 But that is making changes in the pitch of the wire
4 frame model and not in the real world roof that is sitting out
5 there.

6 Now, why might you want to do that? Well, you might
7 have, as we saw from Dr. Bajaj's slide, you know, a hurricane
8 came through and destroyed 50 houses in an area. You don't
9 even have their roof. So you go back to their -- what they
10 looked like originally from photographs or otherwise, and the
11 homeowners say, well, I want to change this. In
12 reconstructing this, I want to make some changes.

13 So that might call for you to change your wire frame
14 model to get calculations of how much it's going to cost to
15 build a different style roof. May be more, may be less.

16 So that would -- that would be a reason that you might
17 want to adjust your wire frame model.

18 But there again, the wire frame model is not
19 determining the pitch. It is simply taking the pitch
20 determination from the pitch determination markers and
21 incorporating it and then modifying it.

22 So in Slide 21, which I think we have. We have this
23 argument that comes right out of the claim language, Your
24 Honor, where we're displaying a pitch determination model,
25 we're receiving, based on the display pitch determination

1 model -- marker, either -- either version of which, an
2 indication of the pitch of the roof, and when we're talking
3 about the roof, we're talking about the real world roof.

4 So having received that indication of pitch, we then
5 modify a model of the roof, the wire frame model, to show the
6 pitch that was determined by the pitch determination model --
7 marker. The wire frame itself does not perform that function,
8 and so that's why we think that the definition has to make it
9 clear that the wire frame itself is not a pitch determination
10 marker.

11 This patent says, the claim language says, the
12 specification says, we've got pitch determination markers. We
13 have a protractor, a pitch determination marker, we have an
14 envelope tool pitch determination marker, that's it.

15 Those give you the values that you can use to modify
16 your model to reflect the pitch as determined by those
17 determination markers.

18 So you don't use the wire frame as a pitch
19 determination marker of the real world roof. You simply use
20 the wire frame model as something that you may, if you wish,
21 modify, and in so modifying it, you modify the pitch values,
22 but they're not the pitch that, as determined from the real --
23 from the aerial images of the real world roof.

24 And that is the same reason why Dr. Mundy gave the
25 answers that he gave, that plaintiffs cite, namely, a wire

1 frame model is a 3D model. A projection of a wire frame model
2 in a drawing is what we have in this patent, or for that
3 matter, in plaintiff's roof estimate reports.

4 So those are different things again reflecting the need
5 to be clear about what's in the 2D world, what's in the 3D
6 real world and how do you traverse the distance between them.

7 So that's why we say that you need to make it clear, we
8 would ask the Court to make it clear in the claim construction
9 ruling that the wire frame just cannot be a pitch
10 determination model -- marker, that there were only the two
11 pitch determination markers as explicitly disclosed in the
12 patent, and we also add the word "model" to the definition
13 because you are, of course, when you're manipulating the wire
14 frame in your computer program, you're not doing anything to
15 the real world roof, you're only manipulating the model. So
16 that's why we say that should be limited to the model.

17 So we think a proper construction, Your Honor, would
18 include either the protractor tool or the envelope tool, but
19 not the wire frame, and that it would include reference to the
20 model, but not to the roof itself. The roof itself is
21 whatever it is, and it doesn't get changed by your computer
22 manipulation.

23 The new roof might, but that's a different story and
24 that's not part of the claim.

25 So that would be our position, Your Honor.

1 THE COURT: Thank you.

2 Do you want to respond briefly?

3 MR. ALPER: Very briefly, Your Honor. Just -- if we
4 could go to our slides, and I'll make this very brief because
5 I don't want to be repetitive, Your Honor.

6 The -- if we could go to slide -- sorry, it's going to
7 be 72.

8 There is no question, Your Honor, that the
9 specification discloses using wire frames as pitch
10 determination markers, in the -- for instance, in the
11 specification excerpt on Slide 72 for the '840 Patent at
12 Column 15, Line 24, it says that pitches are determined based
13 on the figures in 5A through 5D, but also the operator's
14 specification of the wire frame model described in Figures 6A
15 through 6D. It says the -- it expressly says that pitches are
16 determined not just using the protractor tool and the envelope
17 tool in Figures 5A through 5D, but also the wire frames, for
18 instance, in Figure 6C.

19 If we go back to Slide 69, it shows it. In Figure 6C,
20 Item 612, the wire frame can be manipulated by the user for
21 various purposes including -- in the specification, it says
22 pitch determination.

23 And so there's two main takeaways, Your Honor. One is,
24 of course, the point that we've been making about how you
25 can't construe the claim in the way that defendants are

1 suggesting to exclude such clear embodiment. And by the way,
2 this seemed to be a point that may not be in as much of a
3 dispute as it sounded, because it does sound like from what
4 defense -- what counsel was saying that, you know, we agree
5 that you can move the wire frame and that is going to modify
6 pitch.

7 But in any event, the first point is, you can't adopt a
8 construction like the one they're proposing that would exclude
9 embodiments. But the second is something that we can't lose
10 sight of, and that is, if we take a big step back, we have got
11 claim language that says does not include the requirement that
12 the defendants are proposing.

13 The claim language defines what a pitch determination
14 marker is. There's no dispute that in that instance, you need
15 something really big, very explicit to start excluding things,
16 embodiments, described or not, from the scope of the claims.
17 And so the question is, are we saying that a wire frame could
18 never be something that you could use for pitch determination?

19 Well, of course it can be used for pitch determination
20 because it can be, and also, the specification certainly says
21 it, and this doesn't come close to -- I mean, it's the
22 opposite of a lexicographer statement or some clear disavowal
23 or clear statement excluding wire frames from the scope of
24 what a pitch determination marker is.

25 And then the last thing that I just wanted to clear up,

1 Your Honor, if we go to Slide 66, this is an example.

2 THE COURT: Which one, I'm sorry?

3 MR. ALPER: Slide 66, Your Honor. Yes. I'm using
4 this slide because it shows Claim 1 of the '840 Patent and
5 there was a suggestion by counsel that the pitch determination
6 marker can only be used for the initial determination of
7 pitch.

8 But look at what this claim is talking about. This
9 claim is talking about using the pitch determination marker to
10 modify a model. So you have a model, right? And then you're
11 going to use the pitch determination marker now to make
12 changes to it. And that tells us that the pitch determines --
13 that argument is just wrong, that's not a correct argument.
14 I'm not sure that that argument amounts to an exclusion on the
15 claim in any event, but that argument is just factually wrong
16 and it's inconsistent with the claim language, and so for that
17 additional reason, we have to reject their proposals.

18 Thank you, Your Honor.

19 THE COURT: All right. Let's break for lunch. It's
20 12:45. Why don't we come back at 1:30, please? See you then.

21 (RECESS; 12:46 p.m.)

22 THE DEPUTY CLERK: All rise.

23 (OPEN COURT; 1:33 p.m.)

24 THE COURT: Thank you. Have a seat, please. Okay.
25 Moving right along.

1 I think we are on visual marker, correct?

2 MR. BROMBERG: That's correct, Your Honor.

3 THE COURT: Let's start.

4 MR. BROMBERG: So we're on to the visual marker terms
5 as Your Honor mentioned, and they appear in the '770 Patent,
6 Claims 1 to 12, and then the second visual marker appears in
7 the '770 Patent, Claim 1.

8 And incidentally, Your Honor, these terms, "visual
9 marker," they only appear in the claims, they do not appear in
10 the specification and indeed, there are only three things in
11 these patents that are referred to as markers, the
12 registration markers, the visual markers and the pitch
13 determination markers.

14 The wire frame is never referred to as a marker. It's
15 referred to as a model or a 3D model or a wire frame model.

16 So these terms are distinctive, and one of the problems
17 we see in this case is the plaintiff's effort again to stretch
18 their patent to cover things that it doesn't cover, to stretch
19 their wire frame, no pun intended, to be all things to all
20 people, including pitch determination marker, a model, a wire
21 frame model and maybe even a visual marker and the law is
22 clear, of course, that if a claim lists elements separately,
23 those elements are distinct components of the patented
24 invention. I'm citing the *Becton* case, which is in our
25 briefing.

1 So going on from there, we again request that the claim
2 construction makes it clear that the term "first visual
3 marker" is distinct from a displayed model of a roof, and that
4 the second graphical interface is distinct from both the first
5 visual marker and the second visual marker and the displayed
6 model of the roof and those are the points of disagreement.
7 Otherwise, I think we're in agreement about how those terms
8 should be construed.

9 And if we go to Slide 31, we say that because the
10 claims list the first visual marker and second visual marker
11 as separate elements, the two must be treated as distinct
12 components, again, citing the *Becton Dickinson* case. And we
13 see here in Claim 1, the first visual marker appears in the
14 first clause of that claim, the second visual marker appears
15 in the second clause of that claim and, of course, we don't
16 get a model mentioned until later on.

17 On the next slide, we can see that there is Claim 12,
18 which I believe is the only remaining claim in the '770
19 Patent. It's dependent on Claim 1, of course, so it includes
20 all the elements of Claim 1 as a dependent claim, but it also
21 further provides a digital wire frame model construction of
22 the roof structure based on the -- at least one location over
23 the roof structure and the displayed area limits it to which
24 the user moved, released one first visual marker. I think
25 there's a little bit of a grammatical problem, but I think the

1 meaning is clear.

2 That we've got -- so we have between -- we have in
3 Claim 12, including the elements of Claim 1, we have a first
4 visual marker, a second visual marker and we have a digital
5 wire frame model, and we believe that it's important to make
6 it clear that those are each distinct claims and that's the
7 way -- it's our each distinct structures and that's the way
8 they would be understood by a person of skill in the art, but,
9 the jury, of course, needs to know what the proper
10 construction is, and that's why we ask for the Court to put
11 that in, that they are distinct.

12 And the display and movement of the first visual marker
13 proceeds -- serves as an input to and is necessarily distinct
14 from display of the second visual marker.

15 We see that on Slide 33 here, because first, you
16 display a first aerial image and a first visual marker,
17 moveable by the user, then you move the first visual marker to
18 a first location in the first aerial image, then you store
19 data in the memory about the location to which the first
20 visual marker was moved, a very standard way that a computer
21 operates, as Your Honor pointed out this morning, then display
22 a second aerial image and a second visual marker in a location
23 based on the stored location to which the first visual marker
24 was moved in the first image.

25 So the first visual marker must have existed and been

1 moved before, and thus, necessarily distinct from the second
2 visual marker.

3 And again, tracing the same set of steps, we then
4 finally get in Claim 12, the limitation, construct the wire
5 frame model based on the location to which the first visual
6 marker was moved by the user.

7 Well, the wire frame model could not be either the
8 first visual marker or the second visual marker because it
9 wasn't constructed until you got the first visual marker, the
10 second -- and the second visual marker, and then you did wire
11 frame model construction. So again, the first visual marker
12 must already have existed before the wire frame was
13 constructed.

14 So the claim language dictates as a matter of logic,
15 the first visual marker is distinct from a wire frame model, a
16 projected wire frame model of the roof, because if the wire
17 frame, as the claim requires, is based on where the user
18 moved, in the past tense, the first visual marker, that first
19 visual marker must already have existed before the wire frame
20 was constructed, otherwise, the claim would be rendered
21 nonsensical.

22 Plaintiffs --

23 THE COURT: Well, if that's true and seems to be
24 logical, why do you need to add a word "distinct?" Isn't it
25 obvious it's distinct if you have a first and second, they are

1 different things?

2 MR. BROMBERG: Well, first, second and wire frame,
3 Your Honor. And I think that our concern is that the
4 plaintiffs not be able to argue at a later point in the case,
5 oh, well, the wire frame could be the first visual marker, it
6 could be the second visual marker and -- or it could be all
7 three things, wire frame, first visual marker, second visual
8 marker. So we think it has to be clear that given the
9 admittedly somewhat clumsy language in which this claim is
10 written, that the Court should make it clear to the parties,
11 the experts who are going to be submitting expert reports in
12 this case on the merits and the jury that those are distinct
13 things.

14 I agree with Your Honor that it would appear to be
15 obvious. I've been working on this case, however, for a
16 couple of years, I think it might be less obvious if you just
17 walked into court one day and said, okay, now you're a juror,
18 tell me what you think this means. So I think we need the
19 Court's instruction to help avoid juror confusion.

20 And we think that -- that plaintiff's position would
21 render the terms "first and second" meaningless and really
22 leave them out of the claim. If we just say, well, the
23 construction, that they either know construction or first
24 graphical user interface, second graphical user interface,
25 just to specify roof points, the first aerial and the second

1 aerial, respectively, we think it sort of leaves open the
2 possibility of the mischief of saying, well, you can have one
3 thing do both of those things, and, in fact, you can have one
4 thing that isn't even a first visual marker, but it's a wire
5 frame model do all three things. And so that's what we're
6 trying to avoid here.

7 The -- and so let me conclude with a couple of
8 responses to arguments that appear in the plaintiff's
9 briefing.

10 The first one is the contention that our construction
11 of second visual marker excludes embodiments and is not
12 supported by the spec -- specifications. We think the clause
13 in defendants' construction can be manipulated by a user as
14 permissive, and it honors what the specification teaches.

15 There's a fundamental aspect of the claim to markers
16 that they can be directly manipulated by the user, as we
17 indicate in the highlighted language there from the '770
18 Patent, Column 9, and the specification also teaches that this
19 user manipulations is applicable to both first and second sets
20 of markers.

21 So they -- they argue, well, you've got to do this by
22 means of the computer under our construction. Not true. Our
23 construction is permissive. The computer could do it, the
24 operator can step in and do it as well.

25 And then the -- another argument that the plaintiffs

1 made was to argue that -- arguments that plaintiff's
2 prosecution attorney made during the prosecution back in 2013,
3 during the prosecution of the patent, about certain wire
4 frames representing visual markers saying, here it is in the
5 prosecution history, that's basically their argument, so that
6 means we know that they can be wire frames and that's a
7 completely wrong-headed argument for a couple of reasons.

8 First of all, they were the statements of the
9 patentee's lawyer attempting to overcome rejections.
10 Secondly, they were rejected out of hand by the patent
11 examiner who said these arguments have been fully considered
12 but are not persuasive.

13 So they don't constitute a prosecution record for
14 anything other than that the plaintiff's attorney made some
15 arguments that were rejected.

16 So we think on that basis, Your Honor, we would ask the
17 Court to give those terms the necessary clarity that the first
18 visual marker and the second visual marker are two distinct
19 things, and that the wire frame model is, which it's actually
20 constructed based upon them, is a third thing and cannot
21 represent all three things. Thank you.

22 THE COURT: Thank you.

23 MR. ALPER: Your Honor, before I begin, this morning
24 when we made introductions, we inadvertently omitted one that
25 I feel compelled to do now, and that is the general counsel of

1 Eagle View has been here in the courtroom today.

2 THE COURT: Welcome.

3 MR. ALPER: Erica Womer, and we wanted to introduce
4 her to you.

5 THE COURT: Thanks for coming.

6 MS. WOMER: Thanks for having me.

7 MR. ALPER: With that, I'll proceed, Your Honor.

8 And if we could go to our slides on -- if we could
9 start with Slide 88. Some of the issues here on the first and
10 second visual marker terms are similar to the issues with the
11 pitch determination marker, so I'll try to skip slides where I
12 can here.

13 So the -- in the claims and we saw counsel walk through
14 the -- one of the representative claims, you have a claim
15 element for a first visual marker that gets moved and --
16 that's on a first aerial image, and the first visual marker is
17 moved and then that creates a corresponding movement of a
18 second visual marker on a second aerial image, and we'll get
19 into this in a little bit more detail, but on Slide 88, we are
20 showing one of the embodiments -- the embodiments of this.

21 And it's described this way, where you have 6B and 6C
22 and 6B is described as a wire frame or it includes wire frame
23 611, and that wire frame can be moved by the -- manipulated by
24 the user and then as the specification states, that creates a
25 corresponding change to wire frame 612 on Figure 6C, and you

1 can see Figure 6B and Figure 6C have different perspectives of
2 the roof.

3 The one on the left is an oblique perspective, the one
4 on the right is a little bit more of the top-down. And the
5 point here in the patent is that you can obtain greater
6 accuracy with respect to your roof model by having the ability
7 to make changes to the -- the wire frame projection of the
8 roof model on one aerial image and have that impact the wire
9 frames on the other images that you're using. And what the
10 patent says, and again I'll direct you to this specific aspect
11 of the specification on this in a moment.

12 But if we go to the next Slide 89, what that -- what
13 we've done here is we've flipped them, right, so now 7 -- or
14 6C is on the left and -- with wire frame 612, and 6B is on the
15 right, and what the patent says is that -- the specification
16 says that you can go in reverse, right? You can make wire
17 frame 612 be the first visual marker, make changes to that and
18 then that will get carried over to the other wire frames in
19 the other aerial images.

20 And it's really that relationship between movement that
21 defines the first visual marker and then the corresponding
22 movement to the -- on the other aerial image that's the second
23 visual marker, and that's right out of the claim language.

24 If we now skip forward to -- let's skip Slide 93. I'm
25 going to just jump ahead because counsel already covered kind

1 of the walkthrough of the claim.

2 What we see -- what we've displayed here is the
3 disputes between the parties and again, we've highlighted in
4 green the areas of agreement, and in red and yellow the areas
5 of disagreement, and this is another one of those instances --
6 we will show you, that where we think the claim language
7 defines -- tells you everything you need to know about what a
8 first visual marker is, is that no construction is necessary.
9 But to narrow the disputes again, we've adopted the parts of
10 defendants' constructions -- construction that is consistent
11 with that claim language.

12 And as you will see, you can see here one of the
13 disputes that we have is whether the visual marker needs to be
14 distinct from a displayed model of a roof. It's a similar
15 issue to the one that we dealt with, with the pitch
16 determination marker that the defendants' saying that they
17 don't think that the visual marker can be a wire frame, it
18 must be distinct from a wire frame.

19 There's a couple of other disputes that we're going to
20 touch on. Another one, which I think is a -- in -- at least
21 another one is -- actually the other two, I should say,
22 specifically regard the second visual marker, and one of the
23 additional requirements that defendants place on the claims is
24 that the second visual marker has the capability of being
25 manipulated by the user. They say that's a requirement. We

1 will talk about that briefly, and then they also say that the
2 first and the second visual marker, they need to be distinct.
3 I'll handle that very briefly because I think we don't have a
4 disagreement on what -- on an aspect of that, and there's just
5 one issue that we have there that we want to present to you.

6 But we're not trying to change the claim language from
7 first and second. We agree there's a first one, there's a
8 second one, there's two different ones. So that will be an
9 easy issue to deal with.

10 Okay. Let's go to the claim language first, where we
11 started before, Slide 95, and what we're doing here is -- you
12 can see that our construction comes directly out of the claim
13 language.

14 So we say that a first visual marker is an interface
15 component that can be manipulated to specify roof points on a
16 first aerial image. And when you look at the claim language,
17 that's exactly what it says. It says it's movable by a user
18 on an aerial image and it can be -- two, it can be moved to a
19 first location, in other words, specified points.

20 That part of -- our construction, of course, is also
21 that at least, that's agreed to by the defendants, so we have
22 an agreement that's what the claim language means.

23 Then the second visual marker is the same thing. We
24 say it's an interface component to specify roof points on a
25 second aerial image.

1 You can see from the claim language, it describes a
2 location on the roof structure of the building in the second
3 aerial image and, of course, it's an interface component, we
4 agree on that.

5 And so when you have very clear claim language like
6 this, the claim construction telling us what a first and
7 second visual marker, they actually are, the task of
8 performing claim construction here is very simple.

9 So if we go to Slide 96 and we kind of line up the
10 party's claim constructions for first visual marker, you can
11 see that ours is exactly what the claim language says and
12 theirs has that, too, but they have this addition in there
13 which is nowhere in the claim language, and -- or otherwise
14 described in the specifications.

15 And we're just sticking to the claim language right
16 now. We will get to the specifications in a moment in the
17 file history.

18 Slide 97, the same thing, we're adopting the claim
19 language definition of what a second visual marker is and the
20 defendants are adding a number of additional requirements that
21 are not in the claim language, when the claim language tells
22 us what it is.

23 Okay. Slide 98. I'm not going to belabor this, but
24 this is that same situation that we were in, in the pitch
25 determination marker circumstance. When the claim language is

1 clear, the only time that you get to add in additional
2 restrictions is when there is a very strong statement
3 elsewhere in the intrinsic evidence or lexicographer statement
4 or clear disavow, no dispute amongst the parties that no such
5 lexicographer statement or clear disavow exists here.

6 In fact, as we will see in the prosecution, there is
7 strong evidence going the other way that actually, the
8 defendants' construction is incorrect.

9 Okay. Let's go to the specification, because I think
10 that the claim language is dispositive, but the specification
11 is certainly also dispositive. I mentioned before that I was
12 going to show Your Honor the text in the specification
13 regarding these figures.

14 Here is the discussion of Figure 6C, and in particular,
15 wire frame 611. It describes it exactly in the way that the
16 claims describe the first visual marker. It says, changes
17 that the operator makes to wire frame 611. So that tells you
18 that wire frame 611 is something that the operator can change,
19 are concurrently displayed by the roof estimation system as
20 wire frame 612.

21 And that's on Figure 6C, and that is exactly what it --
22 what the first and second visual markers are described as and
23 what they do in the claims. And there's no question about
24 that.

25 If we go to the next slide, slide 100, now we're going

1 to do it in reverse. The specification tells us you can do it
2 in reverse. Now wire frame 612 from Figure 6C is the first
3 visual marker and wire frame 611 from Figure 6B is the second
4 one, and it tells us, "Furthermore, the concurrently displayed
5 wire frame 612 is an interactive user interface element in
6 that the operator can make changes to wire frame 612, which
7 are then concurrently displayed in wire frame 611." And that
8 is exactly what the claims say the first and second visual
9 markers are.

10 By the way, your Honor, these are excerpts from the
11 '770 patent. That's the patent that has these terms. And the
12 one that I just read was from column 14 starting at line 51.

13 And so, when we then look at -- so, the way that the
14 patentees describe the visual marker terms was by using the
15 wire frames. This is the example that they are putting in the
16 specification, at least one of the examples in the
17 specification to describe that functionality, and, of course,
18 that goes to the very central part of the invention, which is
19 you put these wire frames on these aerial images and then you
20 can make adjustments, and one adjustment will automatically
21 update the other images so you don't have to go back and forth
22 manually to all the images, and that's the advantage for
23 accuracy purposes.

24 So, you look at the oblique perspective, make some
25 arrangements there that propagates through your other images,

1 maybe you then go to a top down perspective or a different
2 oblique perspective or more of an elevation view and make some
3 edits and so on and so forth. And that's kind of one of the
4 powerful things about the technology, one of several.

5 So, if we go to slide 101, now we look at the addition
6 to defendants' construction that the first and second visual
7 marker need to be distinct from a displayed model of a roof.
8 Again, displayed model to defendants -- this is on the slide
9 102. In this, just as with the pitch determination marker, in
10 this context also refers to a wire frame. So, they are saying
11 that the, according to them, that the visual markers need to
12 be distinct from a wire frame. But, again, I'm just
13 repeating, slide 103 just repeats what I showed your Honor.
14 It is the wire frame in the specification. And it couldn't be
15 more clear, that is what the specification is describing.

16 And the same thing for slide 104, that's going in
17 reverse. It's that same specification, piece of the
18 specification that I had just put up before. This is all from
19 column 14 of the '770 patent. It tells you, you make a move
20 of the first one and that creates an automatic move or a
21 corresponding move, rather, of the second one. And while this
22 evidence in the claims and the specification is crystal clear,
23 the prosecution history is also crystal clear, and it puts --
24 it further confirms that the defendants's addition here is
25 incorrect.

1 So, if we go to slide 105, what we are showing at the
2 top here is a statement that the examiner -- I mean, I'm
3 sorry, that Eagle View, the applicant, made during prosecution
4 where they explicitly say wire frame 611 in Figure 6B
5 represents a first visual marker, and wire frame 612 in Figure
6 6C represents a second visual marker.

7 So let's take a step back and consider what this is.
8 This is intrinsic evidence. Right? Prosecution history is
9 part of the intrinsic evidence, and this is an explicit
10 statement that says that defendants' proposal is incorrect.
11 Their proposal actually conflicts with the applicant's
12 statement in the intrinsic evidence. So, we know it's got to
13 be wrong.

14 I'm going to address the -- their arguments on the
15 prosecution history in a second, but before I do, slide 106,
16 this is a point that your Honor had made earlier. We see that
17 there are embodiments in the specification where wire frames
18 are the first and second visual marker. That was confirmed by
19 the applicants during prosecution. There is no question. One
20 thing that's not in dispute is that at least defendants are
21 attempting to exclude that embodiment and, therefore, we know
22 it can't be correct.

23 Let me now briefly respond to some of the arguments
24 that the defendants make to attempt to reconcile their
25 construction with some of this evidence. So, first on the

1 prosecution history, you heard counsel say -- I'm going to be
2 going to slide 108, your Honor. You heard counsel say that
3 the prosecution history statement by the applicant should be
4 disregarded because it was rejected by the examiner, but that
5 is not correct and I'd like to walk you through that here.

6 So, here's what happened. The patent was rejected in
7 view of a -- by a reference, prior art reference called
8 Kennedy, and the applicant in its response did two things.
9 First they set up the technology. They said, here, let me
10 explain to you what we have going on in this patent with the
11 first and second visual marker, and they described it with
12 respect to the specification. So, I have reprinted that quote
13 at the top of this slide 108 here where they say -- let me
14 describe to you -- wire frame 611 represents a first visual
15 marker, wire frame 612 represents a second visual marker, and
16 then they go on to describe how those work together. We make
17 a move of the first one and that causes a corresponding
18 projection on the second, for the second marker. They then go
19 on to say, Kennedy doesn't have that. Right? They go on to
20 say Kennedy doesn't have the sort of automatic corresponding
21 movement feature of our patent.

22 If we go to the next slide, this is where the examiner
23 responds. The examiner on slide 109, when he responds, he
24 says, I don't find your arguments persuasive. It's not
25 because he thinks that a wire frame can't be a first visual

1 marker. It's because he thinks that Kennedy has that
2 functionality in it. So, he says, your arguments aren't
3 persuasive because I believe Kennedy -- the applicant argues
4 that Kennedy doesn't have that feature, but I disagree, I
5 think it does. He never disputes that a wire frame can't
6 be -- or can be a first or second visual marker, never does
7 that. You can search high and low in his response, he will
8 never say it. In fact, he concedes it because he doesn't
9 mention it and he actually tries to apply that to the prior
10 art.

11 In any event, whatever the examiner is saying, it
12 doesn't take away the fact that the applicants, as part of the
13 intrinsic evidence, said that the first and second visual
14 marker could be wire frames. And of course they can. The
15 specification explicitly says so.

16 Okay. And slide 110, this is just maybe a little bit
17 of color, you know, what is the ultimate response to that by
18 the expert? The expert says that he didn't consider the
19 prosecution history, and you probably saw that in our
20 briefing.

21 All right. Let's go to slide 112. I'm going to skip
22 to slide 112. There's an argument here, as there was in the
23 pitch determination marker context, about sort of a
24 distinction between the use of the word "wire frame" in claim
25 12 and the first and second visual markers in the independent

1 claim, and I'd like to address that. So, what defendants say
2 is that because claim 12 claims performing by the system
3 digital wire frame model construction based on the move of the
4 first marker, that that means that the first marker can't be a
5 wire frame, and I think there's a couple of important things
6 here.

7 So, first of all, when you look at the claims, there's
8 no requirement -- there's just not -- there's nothing that
9 says that the first and second marker can't be a wire frame.
10 In fact, when we look at the specification, we know that they
11 can be a wire frame, and there's nothing inconsistent with the
12 first and second visual markers being a wire frame and then
13 performing that claim 12 element. In fact, that's exactly
14 what we are talking about when we talk about Figure 6B and
15 Figure 6C. So, let me walk you through that, because this
16 claim here, claim 12, tracks exactly with the 6B and 6C
17 embodiment.

18 So, if we look at the first visual marker, that's a
19 wire frame in 6B. You are then going to make a movement on
20 that. That will modify the model of the roof and it will
21 then -- I'm sorry, it will then cause a second visual marker,
22 a corresponding movement to the second visual marker. And
23 then what happens in this claim is performing digital wire
24 frame model construction, but that's exactly what happens in
25 the embodiment. When you make that move on 6B, that then

1 moves the second marker and creates a wire frame on 6C. And
2 that's how exactly it's described in the specification. So,
3 what they are describing here is the wire frame embodiment of
4 6B and 6C. They are not excluding the use of the wire frame
5 in -- for the first or second visual marker. They are saying
6 in this embodiment, it is a wire frame. In fact, it's
7 literally, that displaying or performing construction of the
8 wire frame model, that's how you get the wire frame that's
9 shown in 6B and 6C. And so it tracks almost exactly with the
10 described embodiments.

11 But the important thing here is that when we're looking
12 at construing the term "first visual marker" and "second
13 visual marker," we can't come up with a construction that
14 would eliminate the crystal clear embodiments, and, of course,
15 the statements by the applicant during prosecution. The
16 addition of this claim element certainly doesn't allow us to
17 then construe the claims in a manner that would be
18 inconsistent with the way that the applicants describe their
19 own invention in the specification.

20 Okay. Part of this argument, if we go to 113, part of
21 this argument or a fair amount of this argument for defendants
22 relies on the *Becton* case, and I think it's worth talking
23 about that for a moment. You heard counsel mention the *Becton*
24 case a moment ago and, of course, that's a central focus in
25 their brief. The *Becton* case was one where in the claims it

1 had these two requirements. One was a spring. There were two
2 structural requirements, one was a spring and the other was a
3 hinged arm. And what the Court there said was, well, these
4 are the two structural requirements and they're actually
5 different requirements. And they looked at the specification
6 and said they're different requirements in the specification.
7 When you look at what they say in that case, I think it's very
8 important here because the holding of the case supports our
9 construction and actually negates defendants' construction in
10 this case.

11 So, here on slide 113, what they say in *Becton* is, "In
12 the absence of any evidence to the contrary, we must presume
13 that the use of different terms in the claims connotes
14 different meanings." But here we don't have an absence of
15 evidence to the contrary. We have strong intrinsic evidence
16 that the first and second visual markers are -- we have
17 conclusive evidence that those are wire frames, and so the
18 *Becton* presumption would not apply and the *Becton* court here
19 would reject defendants' construction on that basis.

20 And if you go down to the bottom of 113, it says here,
21 they go on to say, "The specification in *Becton* comports with
22 the plain language of the claims." But here we don't have --
23 the specification would contradict the proposed construction
24 from defendants.

25 Just lastly, your Honor, defendants, on slide 114,

1 defendants make the point that there's other aspects of the
2 specification that refer to the word "markers." One of those
3 that they put in their brief is the registration markers. The
4 registration markers, they have not shown that these are
5 actual embodiments of the first and second visual marker. In
6 fact, when you read the spec here that we put at column 12,
7 line 4, what it says -- this is at the initial setting up of
8 the correlation. You put the, manually put these registration
9 markers on each of the images and those are adjusted manually
10 on each image. The specification doesn't appear to show them
11 doing the kind of the automatic moving or the automatic
12 corresponding that is done with the first and second visual
13 markers. So, the fact that some things are called markers is
14 not dispositive.

15 And then lastly, your Honor, if we go to slide 16 -- or
16 116, I'm sorry, there's a requirement in defendants' proposed
17 construction that the second visual marker be manipulated by
18 the user. This was really easy to deal with. When you look
19 at the claim language, which one of the markers is
20 manipulatable by the user, it's the first one, not the second
21 one. They're just adding this extra thing in. It's not
22 necessary and it's not called for in the claims.

23 And then lastly, your Honor, on slide 117, the issue of
24 whether the first visual marker needs to be distinct from the
25 second visual marker, the claims already say first and second.

1 The case law we cited in our brief says that that's
2 sufficient. You don't need a further construction to say that
3 these things are different. And the problem with saying that
4 they're distinct, your Honor, is that they are not -- what
5 does that mean? Because one definitely has an effect on the
6 other. Right? The first one moves and it has an effect on
7 the other, and our concern is that that introduces an
8 ambiguity that could potentially conflict with the actual way
9 that the claim is set up. And given that there's already a
10 first and second requirement, we don't need it.

11 We agree, these are two different things. You have a
12 first and a second. That's not the reason that we are
13 opposing this aspect of their claim construction. It's purely
14 because it would add an ambiguity in the claims.

15 I will note, your Honor, as I conclude, that this is
16 essentially an identical issue to one of the other terms
17 that's going to be before you actually next, and my colleague
18 Mr. Brown will handle that one there just so when you see that
19 one come up again. Thank you, your Honor.

20 MR. BROMBERG: May I respond briefly, your Honor?

21 THE COURT: Yes, you may.

22 MR. BROMBERG: Thank you, your Honor. Your Honor, I
23 have to admit that I am confused by Mr. Alper's argument.
24 When I get confused, I like to go back to the law, and the
25 first point that I want to make is that the law is clear that

1 claims must be read, and I'm reading the second bullet point
2 up here, must be read in view of the specification of which
3 they are a part, and the specification is always highly
4 relevant to the claim construction analysis. Usually it is
5 dispositive concerning the meaning of a disputed term.

6 So, Mr. Alper presents to you what I would describe as
7 the fallacy of the excluded middle. Either there is an
8 explicit definition in the term, the lexicographer approach,
9 or there is explicit disavowal and there's nothing else. But,
10 in fact, almost all the case law on claim construction
11 disputes is in between those two. It's the middle. It's
12 where you're grasping for the ordinary meaning, and that
13 doesn't mean the unvarnished meaning, it means the ordinary
14 meaning to a person of skill in the art. And that's what --
15 that's where all of the debating takes place.

16 So, when we point to these patents, your Honor, we say
17 that you've got to have a person who is of skill in the art of
18 photogrammetry, understands triangulation, understands
19 epipolar geometry, and understands that the problem you are
20 addressing again is this fundamental problem of going from an
21 image that's in 2D and trying to get into the 3D space that we
22 know the real world has. So, I think those are important
23 things to keep in mind when we try to construe these claims.

24 Now, if we can go to our slide 32, here again, your
25 Honor, we have the first visual marker, the second visual

1 marker, the digital wire frame model, each sitting in their
2 own clause of claim 12, which incorporates claim 1 by
3 reference, each a distinct claim element, and we believe it's
4 necessary for the Court to so state in the claim construction
5 to avoid exactly the kind of confusion and misdirection that I
6 believe Mr. Alper's argument would get us into.

7 Remember, he showed you repeatedly slides from 6B and
8 6C and they had those blue and green things saying first
9 visual marker, second visual marker, pointing to wire frames.
10 But those words are not in the description of 6B or 6C. They
11 are not in the specification of the '770 patent. They only
12 appear in the claims. So, the argument that somehow it's just
13 plain as day like it assumes the conclusion, if you put a
14 label on it and say here's first visual marker, you're done,
15 and if you put a label on the second one and say here's second
16 visual marker, you're done, well, respectfully, your Honor,
17 you're not done because both of those point to wire frame
18 models which are nowhere described in the specification as
19 visual markers. They are, in fact, wire frame models which
20 the user can manipulate as we discussed earlier, but that
21 doesn't make them first and second visual markers.

22 So, I think Mr. Alper has made clear that the
23 plaintiffs would like to have it all in a state of confusion,
24 just like their argument to the Patent Office which the Patent
25 Office rejected, that, oh, it's all -- it's all one, the wire

1 frame can be everything, and that's simply not what these
2 claims require, and indeed, where claim 12 requires that
3 digital wire frame model construction of the roof structure be
4 based on the place that the first visual marker was moved,
5 that makes it clear that you had to have a first visual marker
6 before you had a wire frame. It can't be one and the same
7 thing. It's simply a matter of logic.

8 So, on that, your Honor, there are a lot of other
9 points that Mr. Alper made that are of concern, and again, I
10 -- but I want to emphasize that this patent, you can read it
11 from one end to the other, it does not have the word "visual
12 marker" in the specification with one exception, column 20,
13 lines 13 to 17, it refers to a visual marker as the edge of
14 the building or a tall chimney. Those are clearly not the
15 visual markers that are named in the claim. So, you have no
16 definition of first visual marker, second visual marker, and
17 wire frame model in that patent.

18 And so we submit that it's really important to avoid
19 confusion for all concerned that it be clear that the first
20 visual marker and the second visual marker and the wire frame
21 model all be described as distinct from each other. Thank
22 you.

23 THE COURT: Thank you. Okay. Keep moving.

24 MR. BROWN: Good afternoon, your Honor. Brandon
25 Brown for the plaintiffs.

1 The one term that I'm going to address are the second
2 line drawing terms, your Honor, and a lot has already been
3 said about the primary issue of dispute here. It comes down
4 to that word "distinct." And I think I heard opposing counsel
5 and I heard your Honor say that it seems obvious in these
6 claims that these are different elements, and I agree with
7 you, and I think that is a good reason not to add this word
8 into the claims, but I also want to explain that there's a
9 risk, a danger of doing it that is worth exploring as well
10 just to understand what the real problem here is.

11 And so to do that I'd like to start by just doing a
12 very brief walkthrough of the claim to sort of set the stage
13 for where we are. And so I have the '454 patent claim 26 up,
14 and this is slide 119 of the plaintiff's deck. And the claim
15 initially calls for a first aerial image and a second aerial
16 image that's taken from a different angle. And so in a
17 cartoon form, I have on slide 120 on the left side, the first
18 aerial image, and on the second, on the right side, the second
19 aerial image which is taken from a different angle. You can
20 see it's being taken from the back of the house in the cartoon
21 that we have.

22 So, we go back to the claim on slide 121 and the claim
23 then requires, in addition to having a first image, we have to
24 have a first line drawing overlaid on that image and we have
25 to have a second line drawing overlaid on that image. So far

1 it seems very obvious, your Honor, that there's a first line
2 drawing on the first image and a second line drawing on the
3 second image. But this is where the risk comes in of the word
4 "distinct." The claim also requires that the first line
5 drawing correspond to features on the second line drawing.
6 And what it means by that is that we be able to correspond,
7 when there's going to be a change to one line drawing, we want
8 to be able to make that change on the second line drawing.

9 And that happens in the next element, your Honor, where
10 in response to the user inputted, and I'm on slide 123, in
11 response to user input, we change a line in the first line
12 drawing, and then on the next element, the computer system
13 makes a change to the line on the second line drawing that
14 corresponds to the feature that we changed.

15 And so if we go to slide 124, and we have the user on
16 the left side make a little change where they pull out the
17 line drawing, make a little change to that line, on the right
18 side, the computer system makes that change automatically.
19 And so the issue here is that the claims have a relationship,
20 the first and second aerial image and the first and second
21 line drawing have a relationship to each other that is very
22 clearly defined by the claims.

23 And so when we go to the construction, and I'll skip
24 forward because we covered a lot of this already, the
25 construction that defendants propose attempts to vitiate that

1 relationship a little bit by implying that there's a
2 distinction, they're introducing a real risk that this patent,
3 that there's something not corresponding between these claims,
4 that there's no -- there's something that's other than a
5 correspondence so that there's something different about these
6 images.

7 And so if we sort of walk through the evidence here,
8 the defendant agrees with us that these are different and that
9 they're obvious, but what they don't notice is that the patent
10 really does in the specification, in the figures, and in the
11 claims, expressly tie these together.

12 So, on slide 133, we see that the embodiment shows that
13 the three-dimensional model that's ultimately created is
14 projected onto both the first and second aerial images,
15 meaning that these two aerial images and these two line
16 drawings are actually coming from the same model, they have
17 the same sort of source. It's the 3D model of the house that
18 we're trying to you can't consider. And we see that in the
19 figures as well, and this is evidence that the defendants rely
20 on. They show that the wire frame corresponds to the other
21 wire frame in another image.

22 So, on the '454 patent at column 14, line 35 to 39, we
23 show that the wire frame 612, which we have covered in great
24 detail, has this direct correspondence. And so if we look at
25 that and we think, okay, there's a relationship, there's a

1 correspondence that's explained in the claims, why can't we
2 just come in and say that they're distinct? And the problem
3 is that -- if we go to slide 135 -- there's literally no
4 support in the patent that says that these two visual markers,
5 as in the previous term, or these two line drawings have to be
6 distinct from each other. It's just not there.

7 And so when we introduce a word that has no basis in
8 the intrinsic evidence, that ends up being a dispute for
9 later. What happens is if we come -- if we introduce the word
10 "distinct" here, at trial or at summary judgment we're not
11 going to have as much time to argue about whether or not the
12 claims read on the product. We're going to have experts
13 arguing about what "distinct" means.

14 Defendants mean something else because it can't be what
15 the claims say. It can't be just that there's an obvious
16 distinction between each of the elements, between each of the
17 line drawings; otherwise, they would agree with just the plain
18 meaning. There's something to "distinct" that we don't know
19 yet that could be a risk and there's no reason to introduce
20 that confusion into the case.

21 THE COURT: What could be the risk?

22 MR. BROWN: I think the risk is this: The jury goes
23 in, if the jury is reading the claims and they're hearing the
24 evidence and they hear the first line drawing has a
25 correspondence to the second, and they're thinking these all

1 come from the same model, there's a relationship, when you
2 change one, it changes the other, and then they hear a claim
3 construction that says, no, no, no, they're distinct from each
4 other.

5 THE COURT: How does "distinct" alter the idea that
6 the one is dependent on the other? In other words, number
7 two, the second marker is dependent on where the first one is
8 and moving in the first one. The word "distinct," how does it
9 change that understanding?

10 MR. BROWN: I think that's a great question, your
11 Honor, and I think that's a possible dispute that we'd be
12 kicking down the road, because there is a risk that it says
13 they can't have that relationship or they have something less
14 than that relationship, that we're narrowing that
15 correspondence. And when you think of the word "distinct," it
16 does imply a separation of issues and it implies that there's
17 a big gap between those two issues, and that's just not the
18 case here.

19 There's another also risk, your Honor, that ties into
20 this. I'm going to skip forward to slide 140. In my cartoon,
21 I showed two houses that are -- or the same house from
22 different angles that are essentially square. They're
23 symmetrical. Now, these are two different line drawings and
24 this would meet the claims if it were sort of a real world
25 example, and you pull away the houses and we look at the line

1 drawings, they're actually identical. They're not distinct
2 from each other because the house happens to be symmetrical.

3 And so what happens when you read in a word that
4 doesn't belong there, that hasn't been used in the patent, it
5 hasn't been used in the specification or the file history, you
6 start to accidentally read out embodiments that for all
7 practical purposes should be covered. There's nothing that
8 says that these two line drawings can't be identical to each
9 other regardless of the angle. And so when you read in
10 "distinct," you start making that slippery slope happen where
11 you just don't know where it is going to end up and what those
12 non-infringement arguments might be that really are outside
13 the scope of the patent.

14 Your Honor, just to transition just briefly to two
15 arguments that were made by opposing counsel in their
16 briefing, there was a reference to the Kennedy patent, and I'm
17 on slide 136, and the file history. Defendants allege that
18 during prosecution Eagle View confirmed that the second line
19 drawing is actually distinct from the first line drawing.
20 This isn't the case at all. There is no express statement or
21 any statement that these things are distinct.

22 Instead, if you look at what was said during the
23 prosecution, they're actually referring to another element of
24 the patent, and it's the same one that Mr. Alper referred to
25 earlier. They're talking about how Kennedy doesn't have a

1 change that's made by the computer system to a second line
2 drawing if that change is made in the first. And so there's
3 nothing in here that changes the plain meaning of the claims.
4 It is going to the exact same point and there was no real
5 statement there.

6 And finally, on the *Becton*, your Honor, defendants are
7 putting forth the *Becton* case almost as a rule that if every
8 element in every claim construction has to read the word
9 "distinct" in, that just isn't the case. We don't put
10 "distinct" into every element merely because it appears in
11 every element or because they are different elements. *Becton*
12 here is particularly inapplicable.

13 And to set the stage a little bit, *Becton* was about a
14 needle that had a safety on it and there was a hinged arm and
15 a spring means that could engage the safety and prevent
16 somebody from being injured by it. The claim calls for a
17 different, a hinged arm, and a separate element, a spring
18 means. The only relationship between those two is that they
19 were connected. There's no mention of any sort of
20 correspondence or other relationship that would complicate
21 matters. And so when the plaintiff came in and they actually
22 argued that a single device could meet both the hinged arm and
23 the spring means, that was a problem. That was a problem for
24 non-infringement.

25 Unlike what happened in *Becton*, that just isn't the

1 case here. That isn't what we're arguing. Mr. Alper said it
2 very clearly, we will show a first aerial image with a first
3 line drawing on it, and we'll show a second aerial image with
4 a second line drawing on it. And so there's really no dispute
5 here that there's any sort of trickery happening. We're just
6 very concerned about the word "distinct" confusing or
7 otherwise misleading the jury or the factfinder. Thank you,
8 your Honor.

9 THE COURT: Thank you.

10 MR. CHRISTIE: Your Honor, I hear a lot of agreement.

11 THE COURT: A lot of agreement?

12 MR. CHRISTIE: I hear some agreement from the other
13 side, Judge. Basically they seem to acknowledge that the
14 first line drawing is separate and unique from the second line
15 drawing, and that --

16 THE COURT: I wouldn't say it was unique, but it's
17 different.

18 MR. CHRISTIE: It's different. And the conundrum we
19 have, Judge, is that based upon the claim language, absent our
20 construction, it permits them to argue that the first line
21 drawing is the same structure, the same thing as the second
22 line drawing, and that is the problem. There is no issue with
23 regard to the correspondence. We acknowledge that there is a
24 correspondence between the first line drawing and the second
25 line drawing. It is clear from the claim language, no

1 question about it. Our request that your Honor use the word
2 "distinct" to make it clear that they are two separate
3 structures, two separate things does nothing to harm or cause
4 confusion with regard to that correspondence. The concern
5 again that we have, Judge, is based --

6 THE COURT: But the word "distinct," though --
7 address their concerns about if you use the word "distinct"
8 that's signaling that there is not this correspondence between
9 one and two, they're entirely separate and entirely different,
10 which is not the way the patent reads.

11 MR. CHRISTIE: Okay. Fair point, Judge. You're
12 right, it's clear from the patent that there was a
13 correspondence between the first line drawing and the second
14 line drawing. You make a change to the first line drawing and
15 there is an automatic change to the second line drawing. So,
16 yes, undeniably there is that correspondence, but again,
17 they're two different things. There's the first line drawing,
18 the user makes changes to it, and it results automatically in
19 changes to the second line drawing, but they can't be the same
20 thing.

21 And it's a theme, Judge, that we've seen in the past
22 with regard to efforts to have the wire frame model be a pitch
23 determination marker, efforts to have the wire frame model be
24 a first visual marker or a second visual marker. They want to
25 have multipurpose tools in their arsenal. They want to say,

1 well, this can be that or it can be the other thing. All
2 we're looking for is to clarify, based upon the specification
3 and the claim language, to make it clear that these are two
4 separate issues, they're different. We acknowledge that
5 they're different.

6 And the *Becton Dickinson* case is particularly relevant
7 here because, again, it stands for the proposition that where
8 a claim lists elements separately, the clear implication is
9 that the elements are distinct, and that's where we draw the
10 "distinct" from. They're distinct components of the patented
11 invention. And that's the *Becton* case, 616 F.3d at 1254.

12 And because they are distinct, they are listed
13 separately, obviously there is no harm to having that made
14 crystal clear, because otherwise, Judge, we run the risk, the
15 clear risk that plaintiff has suggested, and if given leave to
16 do it, may well do it at some point in the future, that if two
17 line drawings are displayed as projections of the same
18 underlying model, they may well argue that those line drawings
19 are not separate and distinct, but are the same thing, that
20 the first line drawing could, under some circumstances, be the
21 second line drawing; the second line drawing could, under some
22 circumstances, be the first line drawing; and that is
23 completely contrary to the claims, to the specification, and
24 we just want to make that crystal clear and narrow.

25 Your Honor acknowledged it in questioning opposing

1 counsel, what's the harm here. There is no harm here. We're
2 not doing violence to the correspondence or to the
3 relationship. Far from it. We are just making sure that when
4 the claims and the specification call out these line drawings
5 separately as first and second, that it means something, and
6 that you can't fudge it down the road and say, well, one can
7 be the other or the latter can be the former. I mean, that is
8 the gravamen here, Judge.

9 And part of the concern is that we're talking about two
10 separate patents. We're talking about the '454 patent as well
11 as the '737 patent. And the '737 patent doesn't have that
12 nice correspondence. It doesn't talk about first line drawing
13 and second line drawing. It talks about a line drawing. And
14 it talks about the line drawing being imposed on the first and
15 second aerial images, but there is a source of confusion here.
16 And because the '737 patent and the '454 patent derive from
17 the same almost identical specification, they're in the same
18 patent family, as your Honor knows, as a claim construction
19 principle, it all should be read consistently and interpreted
20 consistently.

21 So, therein lies the concern, Judge. We have the
22 *Becton Dickinson* case which tells us that it should be
23 distinct. We have an acknowledgment from the other side, and
24 I need not belabor it, that they are different. They are
25 different structures. And to make it more clear, I'll point

1 to the '454 patent, column 14, lines 7 to 49, which lays that
2 out in greater detail.

3 But I do need to talk about the prosecution history
4 because during the prosecution history, as opposing counsel
5 mention, there were issues with regard to this type of claim
6 term, and more particularly, the patentee was distinguishing
7 between those two claims -- I'm sorry, those two terms. And
8 what's critical is in the first bullet point that we reference
9 on slide 42, it's a snippet from our reply to an office
10 action, and it talks about respectively, it talks about a
11 first line drawing on a first aerial image and, respectively,
12 a second line drawing on a second aerial image, making it
13 clear that we're talking about two things. We're talking
14 about a first line drawing and a second line drawing. Indeed,
15 they have correspondence, but they also have correspondence to
16 a separately identified aerial image, the first line drawing
17 to the first aerial image and the second line drawing to the
18 second aerial image.

19 Further down, Judge, indeed, contrary to opposing
20 counsel's argument, there was a clear distinction of the
21 Kennedy reference based upon this particular term. In
22 distinguishing Kennedy, which they were required to do for
23 their office action response, they were saying, contrary to
24 Kennedy, no changes made to any second line drawing that
25 impacts the first line drawing. So, what they were

1 deliberately doing is calling out the fact that Kennedy
2 doesn't do that. And by virtue of arguing that, they
3 obviously got a patent issued.

4 So, by virtue of their affirmative statements in their
5 office action responses, by virtue of the fact of their
6 efforts to distinguish prior art, the Kennedy reference, they
7 are acknowledging, Judge, that these are distinct items and
8 that there was no issue or quarrel with calling them that by
9 virtue of a claim construction.

10 So, again, because we're talking about terms in two
11 different patents which are part of the same family, they
12 should be determined distinctly and with the same definition,
13 and it's clear, and opposing counsel acknowledged that we're
14 also talking about concurrent display, which was going to be
15 the next bunch of terms that we're going to talk about, that
16 the display is concurrent. When you modify the first, the
17 first line drawing, by virtue of the computer, it is
18 automatically migrated to the second line drawing.

19 And you see, and I'm looking at claim 1 of the '737
20 patent, again we talk about the respective issue, respective
21 line drawings, and again, this harks back to my earlier point
22 that in the '737 patent it's not called out as neatly as in
23 the '454 patent by saying first line drawing, second line
24 drawing. It does make clear that the line drawings overlay a
25 first aerial image and a second aerial image, but a clever

1 attorney could argue that, well, by virtue of that, this line
2 drawing in claim 1 of the '737 patent, despite the fact that
3 it overlays the first aerial image and the second aerial
4 image, could be the same thing. And again, that's the point.
5 Judge, we need clarity because of the imprecision with which
6 the claims were crafted across the patents in the family that
7 are asserted here.

8 Finally, Judge, in conclusion, we agree that they are
9 different structures. *Becton Dickinson* is directly on point
10 and suggests, not just suggests, but requires that there be a
11 call-out to render them distinct, and that there needs to be
12 some affirmative effort by the Court to construe the term in a
13 manner that does not allow plaintiffs to argue that the first
14 line drawing can ever be the second line drawing or the second
15 line drawing can ever be the first line drawing. There is the
16 correspondence between the two. We do not deny that. And the
17 fact that you actually render a construction which calls them
18 distinct does nothing to harm that relationship. And on that
19 I will conclude. Thank you, Judge.

20 THE COURT: Thank you.

21 MR. BROWN: Very briefly, your Honor. On slide 133
22 of the plaintiff's deck, your Honor, I just wanted to respond
23 to one thing that Mr. Christie said. He said, and I wrote
24 this down, so it might be a bit of a paraphrase, but he said
25 the risk of not putting "distinct" in is if there are two line

1 drawings that are displayed as a projection of the same
2 underlying model, that is contrary to the claims. That's what
3 he just argued as one of the risks or really the key risk of
4 putting "distinct" -- not putting "distinct" into the claims.

5 I want to take you to the '454 patent, column 23, line
6 10 to 13. That risk that Mr. Christie just argued should be
7 excluded from the claims is literally what this element, what
8 this part of the specification says about one of its
9 embodiments. It says, in one embodiment displaying the
10 feature from the modified three-dimensional model includes
11 projecting the three-dimensional model onto both the first and
12 second aerial images. So, the risk that Mr. Christie was
13 articulating was not a risk that is at issue here because it
14 would exclude the embodiment if we were to read that out.
15 That's the only point I had, your Honor. Thank you.

16 THE COURT: Okay. Thank you. Who is next?

17 MR. CHRISTIE: Your Honor, the last three terms are
18 very similar. Again, they're all in the same patent family,
19 the '454 patent, the '152 patent, and the '737 patent, and all
20 of them have to do with the same issue, and the issue is
21 simultaneity or concurrent display and/or change. That's the
22 issue.

23 We are dealing with a computer system. The other side
24 acknowledges that we're dealing with computer systems. And
25 when you are making changes to one line drawing, we have

1 acknowledged that there was a correspondence between that
2 first line drawing and the second line drawing, and the change
3 migrates to the second line drawing, but by virtue of the fact
4 that it's done by a computer system, it is done
5 simultaneously.

6 THE COURT: Assume that's true, that in almost all
7 instances it will be done simultaneously, what does the patent
8 say about that?

9 MR. CHRISTIE: The patent doesn't specifically use
10 that term, the claim, does not specifically use that term,
11 Judge. But on the other hand, there is abundant references in
12 the specification which talk about simultaneity. So, for
13 example, we're talking about the '152 patent displaying a
14 projection where the plaintiffs say that there is no need for
15 construction and they parrot the claim language, and what we
16 have asked to add for sake of clarity is the last clause,
17 slide 47, your Honor.

18 THE COURT: 47? Thank you.

19 MR. CHRISTIE: Yes.

20 THE COURT: All right.

21 MR. CHRISTIE: What we're asking is that the last
22 clause be added, so that the feature is displayed on the
23 second aerial image as the user indicates the feature on the
24 first aerial image. Again, the concept of concurrence or
25 simultaneity. Again, it seems logical, it seems obvious, the

1 fact that we have a computer system involved here, that that
2 is the case, and we want to just make that clear.

3 The next slide, 48, it's clear, these patents all talk
4 about concurrent display systems. It can't get more clear
5 than that. That's how they title their patent. So, that's
6 what they're all --

7 THE COURT: What are you concerned about? There's no
8 dispute that it is going to be concurrent showing. What does
9 "simultaneous" add to that?

10 MR. CHRISTIE: Judge, we use the terms -- we intermix
11 the terms. I mean --

12 THE COURT: Well, they're not exactly the same. I
13 mean, simultaneous is concurrent, but maybe not the other way,
14 concurrent doesn't have to be simultaneous. In other words,
15 there is some kind of time frame you're talking about here,
16 but not necessarily simultaneous.

17 MR. CHRISTIE: Fair point, Judge, and I guess it
18 depends upon how you define the term and what the context is.
19 Again, we're happy to live with concurrent because that
20 signifies that it happens automatically and without delay,
21 right after the first action happens. The user makes a change
22 to the first aerial image, and voila, it shows up on the
23 second aerial image. So, I don't think it's a quarrel between
24 concurrent and simultaneous more than it is an acknowledgment
25 that it is automatic, that it happens automatically, that it

1 happens without delay.

2 THE COURT: I'm not sure I am following you now. Are
3 you saying that you don't believe this patent says it's
4 automatic?

5 MR. CHRISTIE: Well, there are portions of the
6 specification that talk about it being automatic, but we want
7 to make it clear, Judge, that based upon the claim language,
8 there is no way to get around the fact that the displaying, or
9 when we talk about changing, it is done automatically one to
10 the other.

11 So, let me just start out quickly, Judge, by pointing
12 you to claim 1 of the '152 patent, which is the independent
13 claim upon which claim 8 is dependent, and it sets forth the
14 framework here. You are receiving an indication of a feature
15 and then you have that -- and then you are modifying the model
16 based upon that received indication, and then you're
17 displaying a projection of the feature onto the first and
18 second aerial images. Okay. That's a one-step process.
19 You're displaying it on the first and the second aerial
20 images. It's a one-step process, it happens concurrently, it
21 happens automatically.

22 That's the issue, Judge. It's simultaneous. It
23 doesn't specifically say that. But when you look at the spec,
24 the specification of the patent, and we're talking on the next
25 slide, which is slide 50, it lays this out rather nicely. You

1 see that it says on the top "the described user interface is
2 also configured to concurrently display roof features onto
3 multiple images of a roof." Okay. And we're talking about
4 this again in the context of roof model generation.

5 We've heard in the past, and we will be talking about
6 it a little bit here, that this is the roof model generation
7 phase, not the review of the roof model after it has been
8 created. The plaintiffs want to make much of the fact that
9 there is other language in the specification that doesn't talk
10 about simultaneity, that doesn't talk about concurrence, but
11 it's in the review process after the wire frame model has been
12 created, not the roof model generation process which we're
13 talking about here.

14 Finally, toward the end of that snippet, we talk about
15 the roof estimation system, the user interface concurrently
16 displays the feature in one or more images of the roof so that
17 the operator may obtain feedback, et cetera, et cetera. So,
18 again, Judge, we're talking about it's replete that concurrent
19 is throughout the specification, that when you're talking
20 about displaying and later when we talked about changing
21 things, it is done concurrently.

22 So, again, more portions of the specification that
23 support this view, Judge, and I'm looking at slide 51, talks
24 about when the operator indicates a feature in the first
25 image, a projection of that feature is automatically presented

1 in the second image. Again, talking about an automatic
2 simultaneous transition. And then we have further down column
3 5, line 67, through column 6, line 4, again talks about
4 simultaneous projection in order to help the user understand
5 the correspondence between the image and the model.

6 And I have to commend to your attention, Judge, the
7 next slide, Figure 11, Figure 11 says what needs to be said.
8 It is a flow chart. It is crystal clear. It talks about the
9 concurrent feature display. It doesn't get more clear than
10 that. And it has an ordered listing of steps, and you will
11 see, of course, that the last one talks about concurrently
12 display a projection of the feature for the modified
13 three-dimensional model onto the first and second aerial
14 images. Again, we're talking about concurrent, we're talking
15 about automatic, we're talking about simultaneous.

16 And if you look at the specification which interprets
17 this figure, you will see that that language is used, and I'm
18 looking at the next slide, which is slide 53, column 23, lines
19 14 to 21, and column 23, lines 22 to 32, talk about
20 simultaneous projection onto the second image, talks about
21 concurrent display multiple features, so that the operator can
22 view the work concurrently projected onto a second image. So,
23 again, Judge, the specification is replete, replete with
24 guidance to show that this is all done automatically and
25 simultaneously.

1 And if that was not enough, I commend to your Honor's
2 attention Figure 6A through 6D, again which is model
3 construction. We're in the model construction world. And
4 we're looking at the specification which interprets those
5 figures. You know, we see, for example, in the '152 patent,
6 column 13, lines 49 through 56, we talk about concurrent
7 display of the roof features. And further down at the bottom
8 of the page, column 13, lines 64 to 67, again, the roof
9 estimation system concurrently displays the specified roof
10 sections in each of the other images. So, Judge, that's what
11 the specification tells us with regard to this display term,
12 that it is concurrent, that it is automatic, that it is
13 simultaneous.

14 And, of course, you know, the specification is crystal
15 clear, but even in the prosecution history, again, we have
16 kernels of information which indicate that that is correct as
17 well, because again, in order to get their patent issued, and
18 I'm looking at slide number 55, the patentee again
19 distinguished the prior art. Pershing, which is not -- it's
20 the same inventor but a different patent, distinguished this
21 prior art Pershing reference by indicating that there is no
22 show of projection of a feature onto any aerial images, let
23 alone a projection of a feature from a modified
24 three-dimensional model of a roof. So, by virtue of their
25 distinguishing that reference, they are acknowledging crystal

1 clear that it is automatic, that it is simultaneous, and that
2 it is concurrent.

3 You know, finally -- no, not quite finally -- we have
4 their construction, and I'm specifically looking at further
5 prosecution history elements on the next slide, where they are
6 dealing with the '454 patent, which is a continuation. Again,
7 I won't belabor it, Judge, because it's right before you. It
8 talks about concurrent display repeatedly throughout that
9 office action reply acknowledging that that is how it should
10 be done.

11 Finally, Judge, with regard to the extrinsic evidence,
12 we have Dr. Mundy in his declaration, paragraph 99 and 98, as
13 well as his deposition testimony which is listed there on the
14 slide, advising clearly that the system discloses that a
15 change made in one image would correspond to a simultaneous
16 change in another image. And their expert, Dr. Bajaj,
17 acknowledges that the '152 patent deals with concurrent
18 display systems. So that all matches up, Judge. We've got
19 the intrinsic evidence, we've got the extrinsic evidence, and
20 we need clarification to show that it is automatic, that it is
21 simultaneous, that it is concurrent.

22 There are a number of issues that the other side has
23 raised and I'll touch on some of them briefly, Judge, but let
24 them flesh out their arguments as well. They raise a couple
25 of issues. They claim that there is a claim differentiation

1 issue. They point to claim 4 which talks about something that
2 is substantially coincident. Substantially coincident, what
3 is that? It sounds indefinite to me, but it clearly is
4 something different from concurrent or something different
5 from simultaneous. So, we're not talking about claim
6 differentiation because we're not talking about an element of
7 a dependent claim that is -- that corresponds to what's
8 already in an independent claim.

9 And, for example, we have a representation by
10 plaintiffs in their responsive brief at page 24 which makes
11 clear that their view is a dependent claim frequently claims
12 one example of what is covered in a broader independent claim.
13 So, separate and apart from whether substantially coincident
14 is equivalent to concurrent or simultaneous, the claim
15 differentiation document, as your Honor knows, is a
16 presumption. The presumption is not met here because of the
17 overwhelming evidence in the intrinsic record with regard to
18 the automatic nature of the display.

19 And again, finally, Judge, as I mentioned earlier, you
20 will hear at least from what the slides show me that they're
21 going to focus on Figure 7A. They love Figure 7A because that
22 seems to fit their view of the world, but again, it's not
23 appropriate because Figure 7A, it talks about the roof model
24 review stage. And as I demonstrated earlier, Judge, we're not
25 in the roof model review stage. The roof model hasn't been

1 created or generated yet. We're in the roof model generation
2 phase. So, references to Figure 7A and a specification that
3 interprets Figure 7A don't do it for us. They are irrelevant
4 and not worth considering in this context. And they are
5 certainly not a preferred embodiment as plaintiffs make clear.

6 With that, Judge, I'm done with the displaying of
7 projection term and I'll turn it over to opposing counsel to
8 address.

9 THE COURT: Thank you.

10 MR. CUTRI: Your Honor, Gianni Cutri for the
11 plaintiff.

12 If you have our slides, I'll be beginning at Slide 149.

13 So we're here on Slide 149, we're talking about
14 responsive changes. I'm going to begin with the '454 patent,
15 some of these issues carry over across patents but importantly
16 some do not. In particular when they get to '737 patent,
17 there's something very different happening with respect to
18 what claim language we're supposed to be construing, and I
19 will go do my best to deal with that when we get there.

20 So if we go to the next slide, we're starting with the
21 '454 patent, on the next slide I thought it would be
22 important, your Honor, because at the very end of opposing
23 counsel's presentation you heard him make reference to Figure
24 7A, they love Figure 7A but it's irrelevant and sort of
25 discounted. And I think that was a signal that they

1 understand that that's really a critical issue here, is that
2 we do have an embodiment that undermines their proposed
3 construction.

4 And so when we -- we can go through Claim 26 briefly on
5 the '454, it talks about displaying a first aerial image of
6 the roof; displaying a second aerial image of the roof;
7 displaying a line drawing overlaid on the first image;
8 displaying a line drawing overlaid on the second aerial image;
9 the purple says user changes line drawing; computer system
10 changes second line drawing in response; and then we generate
11 a roof estimate report.

12 If you go to the next slide, you can see that these are
13 the constructions.

14 But really what is most helpful is the next slide,
15 which is 153, now we can see an almost a track changes style,
16 what's different?

17 We believe that the claim language which is on the left
18 should be left unaltered. They want to make two changes. Now
19 this is the element where I just talked about where after user
20 has a made a change in the first -- to the first line drawing,
21 the computer changes a line in the second line drawing. What
22 they have added here is really two things, but they've done it
23 at once. And let talk about the simultaneous display
24 requirement. All right? That's what they're saying. They're
25 saying let's add something onto this that as the user makes a

1 change in the first line drawing, it is simultaneously
2 displayed in the second line drawing. Not merely that the
3 user makes a change and the computer makes a corresponding
4 change to the line drawing, but you simultaneously see both
5 displayed. That's what they want you to add to this claim
6 element.

7 They also want you to delete the fact that the change
8 is made in response to the computer system, but we'll get to
9 that in just a little bit.

10 So if we go to the next slide, they have a similar
11 approach to the '152 patent. I've put the claim language on
12 the left, which is what we think should be left undisturbed,
13 and then they're proposed construction on the right. Here
14 they're not deleting, they're just adding.

15 And when we get to the '737, which is the next slide,
16 there's a lot going on here, and I'll have to come back to
17 that because I don't want to do two things at once in terms of
18 our analysis.

19 But let's look at Slide 156, because this is where you
20 will see Figure 7A. Figure 7A is an embodiment where a user
21 makes the change to a wire frame in just one image. You can
22 see that in Figure 7A, we've highlighted it in red, but
23 there's in dispute in Figure 7A there is a wire frame over
24 just the top-down image. And we know that because it shows us
25 that in Figure 7A. But it also says, Figure 7A shows the user

1 interface screen 400 after the operator has constructed a
2 model of the roof using one or more of the images 402 to 406.
3 In this example, a wire frame has been projected onto
4 (superimposed upon) image 402 and annotated with roof section
5 as we'll describe further in the enlarged portion 708 in image
6 Figure 7B. So there's a dotted line around the red line
7 drawing.

8 And so if we go to the next slide, we can see Figure
9 7B. What we've done is we've just extracted that line
10 drawing, the dotted line piece, and we're looking at it sort
11 of in close up. And we know from our various discussions this
12 morning that Figure 7B talks about a wire frame that a user
13 can move. Right? And we see it right here. For example,
14 when an operator drags handle 710a to a new location, the ends
15 of the two line segments connected to handle 710a will also
16 move.

17 So if we go back one slide, we see that there aren't
18 wire frames in the other images.

19 So what they want to say is, well, the patent should be
20 construed to not cover this situation. Because what they want
21 to say is the patent should be construed only in the
22 situations where a user makes a change in the first line
23 drawing and it's simultaneously displayed in another line
24 drawing on a second image. But there is no other second line
25 drawing on a second image in Figure 7A.

1 So how does Figure 7A work? Why would you do this?

2 So what happens is you make a change here to this line
3 drawing. You have visually these other images but you don't
4 have a line drawing on them. It's quite small but over here
5 on the left in user -- in the interface there are five dots,
6 they are a center, a north -- I'm sorry, a top-down, a north,
7 a south, an east, and a west. The quality is bad, but what is
8 happened here is I make a change in the top-down view, I'm
9 going to move my line and I'm going to try to get it closer to
10 ridge that runs along the top of the house. Did I get it?
11 Let me display where I'm currently looking, where the top-down
12 view is, let me display the east view and see if that lines up
13 there. At a later time, not at the same time, I'll do it just
14 one at a time. That's what Figure 7A is describing.

15 And how do we know that that's what is meant? How do
16 we know that it's do it one at a time, show a line drawing on
17 one image and then at a later time show it on another?

18 If you will go to, I'm jumping ahead just a little, on
19 162, just look at the bottom, if you would, your Honor, this
20 is Claim 31. The method of Claim 26 further comprising.
21 Displaying the second line drawing overlaying the second
22 aerial image on the same display at a later time, after the
23 displaying of the first line drawing overlying the first
24 aerial image of the roof on the display.

25 If you were to say I'm going to construe the broader

1 dependent claim to always require simultaneous display, and I
2 put defendants' construction on Page 162 right above the
3 dependent claim, you would see that it would contradict Claim
4 31. Now, I have this labeled as a claim differentiation
5 argument, but it's really not the legal principle claim
6 differentiation. This is an effort where the proposed
7 construction literally contradicts the plain language of the
8 claims. It would be an impossibility to always have a
9 simultaneous display of a change in a first line drawing show
10 up in a second line drawing if you were displaying the second
11 line drawing at a later time.

12 And so I'm going to go back but there is -- you know,
13 for us that's a fundamental issue, and I think that, you know,
14 the defendants urging of you to just ignore this and I think
15 the argument is, well, we're in a different mode in the
16 patent, we are not talking about roof review and not roof
17 construction.

18 THE COURT: That's what they're saying.

19 MR. CUTRI: That's what they're saying.

20 THE COURT: It's all about the timing in the process,
21 where are you in the process.

22 MR. CUTRI: Right. But that doesn't mean that the
23 claim doesn't nonetheless have an optionality. There isn't an
24 embodiment where during roof review we don't have simultaneous
25 display of changes being made. And we know during roof

1 review, if that's what they're going to call that section,
2 even during roof review, which is on Page 157, the operator
3 can drag the handles to a new location and make changes. So
4 that -- it doesn't -- saying, well, that's during roof
5 construction, that's during model construction, that's during
6 roof review doesn't really change the fact that there is an
7 embodiment in this patent where you do not simultaneously
8 display changes from a first line drawing at the same time in
9 the second line drawing. And that's just a very significant
10 issue because what they're asking you to do is exclude that
11 embodiment, just say take your pen and write it out of the
12 patent and pretend it doesn't exist.

13 And if you look at on Page 159, a claim construction,
14 this is the federal circuit, a claim construction that
15 excludes the preferred embodiment is rarely, if ever, correct.
16 That's what they're asking you to do. So they're asking you
17 to get rid of what the patentee told the world this what I
18 have.

19 Now, to be clear, the patentee also said I have
20 concurrent display as well. I have a concurrent display of
21 changes as well. And that's what they mostly point to. They
22 say, well, these other examples that talk about concurrent
23 display, there's no disagree between the parties that there's
24 also concurrent display. There is a very significant
25 disagreement as to whether there is -- that is a requirement

1 of all claims and that's because there's embodiment that shows
2 that that's not the case.

3 Now, there's something else going on when you look at
4 the dependent claims, and that's on Slide 160. Claim
5 differentiation is the principle that says, you know, when you
6 have something in a dependent claim, don't read it into an
7 independent claim because otherwise you're making the
8 independent claim irrelevant, that's claim differentiation.

9 And so what I've done on Slide 161 is I've pointed out
10 that when they have the simultaneous display, if you take that
11 simultaneous display requirement and you add it to the
12 dependent -- I'm sorry, the independent Claim 26 of the '454
13 patent, what you are doing is you are making Claim 29, which
14 talks about changing a second line drawing at a time that is
15 substantially concurrent to the time the changes are being
16 made by the user in the first line drawing, you're making that
17 irrelevant.

18 Now, I've heard a reference to, well, maybe
19 simultaneous doesn't mean substantially concurrent. But I
20 also heard the defendants' counsel make reference to the
21 current and simultaneous being synonymous. But, in any event,
22 Claim 31 really ends the inquiry because we have the reverse.
23 Right? We have the patentee trying to claim, okay, I want to
24 make sure that the world knows I have an embodiment that has
25 substantially concurrent and I have an embodiment that says

1 the display of the first -- of the second line drawing can be
2 at a later time, and they told us that clear as day in words
3 and in figures.

4 So, as you know, because Slide 163 is sort of now the
5 classic slide on the day, you know, there's only two instances
6 they have to now, they're the ones telling you change the
7 claim language, add something to the change. We don't have
8 any argument by them that the patentee put a definition and
9 said this is the only way to do it, and in fact we have the
10 opposite. We don't have anything in the file history.

11 What we have, and what I've done on 164, is I've taken
12 every instance from the defendants' briefs, opening briefs and
13 responsive briefs, and I've made a little table for your Honor
14 so that when you look at their brief and you see their
15 references to concurrent, what you won't see is the fact that
16 in the patent those are always described as example
17 embodiments. So what I have not done is I've shown you in the
18 patent everywhere that they've made reference to something and
19 suggested like this is the only way or this is what the
20 patentee was telling the world. I'm showing you that the
21 language that's included in always "for example" or "in an
22 example embodiment." And on 165 I've done the same thing.
23 They basically have four places they go to in their slides and
24 in their briefs and say here's some examples where it's
25 concurrent. And we don't disagree that there are some

1 examples where the display is concurrent, where we disagree is
2 it's the only example provided in the patent.

3 So and even if there was a single embodiment, if this
4 was a patent that had a single embodiment where it was
5 concurrently displayed, it would still be improper to limit
6 the claims to that because the federal circuit says even if
7 there's a single embodiment, it's improper to limit the claims
8 to that if the claim language is broader. But here it's twice
9 as wrong because we have the embodiment that contradicts their
10 claim construction.

11 Now they have reference here to the Kennedy reference.
12 They say, well, you know, there was a reference in the file
13 history, there was something that was said in the file history
14 that you should interpret to mean that the claims were -- the
15 claims should be limited to substantially -- to a
16 substantially -- I'm sorry, to a simultaneous display. Right?
17 And so what they're really saying is if you go back and look
18 at the things the patentee said to try to get the patent,
19 you'll find the patentee disclaiming what is in Figure 7A and
20 saying we don't want what's in Figure 7A, we don't want a
21 nonsimultaneous display. But I'm putting up here what was
22 said, the actual exhibit that they cite to and it doesn't say
23 that. They're saying, well, this is a Kennedy does. There's
24 no changes being made by the system to any line drawing
25 overlaying a second image based on changes by the user to the

1 first line drawing, and so in Kennedy the user manipulates
2 both view ports. And so this isn't the kind of clear
3 disclaimer where the patentee says I am giving up what I told
4 the world I would otherwise be entitled to, and that's why the
5 disclaimer doesn't help this construction either.

6 They point to a different claim, Claim -- what was then
7 Claim 2 and ultimately issued as Claim 1 on 167. That claim
8 is completely different. That claim actually has a
9 correlating limitation that's asserted from this patent, so it
10 doesn't help them in that respect.

11 So let's talk about what -- so I think that covers in
12 the '454. And, by the way, that embodiment, that 7A
13 embodiment, you find it in each of the '152, '454 and '737
14 patents, you find it across all of the patents with the same
15 description.

16 And so in the '454 patent what else are they doing?
17 The other issue we have is they're deleting the claim text.
18 And when you look at their briefs, they don't really dispute
19 that they're improperly -- that they're deleting the claim
20 text, they just say, well, we kind of feel like it's capture
21 by the red language. I'm on 168. They say, well, we've
22 deleted it but if you just put in what's in red underline,
23 that will be the same thing. But they're clearly not the same
24 thing. What's been deleted is the change in the second line
25 drawing being made by the computer system in response to the

1 change that was made by the user. They actually took out one
2 of the fundamental parts of the patent and they're saying just
3 have the computer system simultaneously display it without
4 keeping in that cause and effect relationship.

5 And why would they do that? Well, we know -- well,
6 first of all, it's improper to do that. We know that the
7 federal circuits have said repeatedly you don't make changes
8 to claim language unless there's a very good reason. And on
9 the affirmative side you always try to give all of the claims,
10 all the terms in the claim their full effect. And that's on
11 169.

12 We also know that when we were getting the patent, we
13 relied on the fact that there was a user doing something and a
14 computer system making the change in response in order to
15 distinguish over other prior art. So there's a danger, I
16 don't know it's an issue in this case right now, but there's a
17 danger that they'll say, oh, now we can point to where
18 anything happens in either image irrespective who it did it,
19 whether it was a user or computer system, it's important not
20 to just remove language.

21 I'm going to actually do the '152 right now. I think
22 Mr. Christi just did the '152. I don't know if he's going to
23 go patent by patent, I'm not sure, but I think he's going to
24 go patent by patent. He did the '152. In the interest of
25 time I'm going to do -- I did the '454, I'm going to do the

1 '152 right now, I think he's going to do did '154. I guess
2 we'll get back up potentially and do to '737, but I'll touch
3 on what I think the issue is around the '737.

4 THE COURT: Why don't we take a 15-minute break? It
5 is 3:15. Why don't we do that.

6 (Brief Recess)

7 THE COURT: Everybody ready?

8 MR. CUTRI: Yes.

9 THE COURT: Lisa, you all set?

10 MS. MARCUS: Yes, sir.

11 THE COURT: Let get going. Have a seat and let's go.
12 Go ahead.

13 MR. CUTRI: Your Honor, I was just starting the
14 presentation on the '152.

15 The '152 patent has disclaim language, displaying a
16 projection of the feature from the modified three-dimensional
17 model onto the first and second aerial images as a line
18 drawing of the feature, each overlaid on corresponding
19 locations of the feature on the first and second aerial
20 images.

21 They've added -- they've just tried to capture the same
22 concept and put it into this claim language, I think, because
23 they say, so that the feature is displayed on the second
24 aerial image as the user indicates the feature on the first
25 aerial image.

1 I think this is fairly characterizing -- they id
2 characterize it as the simultaneous display. They want the
3 display on the second aerial image as the user indicates the
4 feature on the first aerial image.

5 And so -- and in case there was any doubt on 173, we
6 have Dr. Mundy's declaration and he says one of ordinary skill
7 in the art would understand that it is also specified that
8 when the operator indicates a feature in the first view the
9 display --

10 THE COURT: Counsel, slow down.

11 MR. CUTRI: Sorry.

12 THE COURT: She's really good, but nobody is that
13 good. Go slower.

14 MR. CUTRI: Indicates a feature in the first view of
15 the display of the corresponding -- in the first view the
16 display of the corresponding feature in the second view occurs
17 simultaneously.

18 They're clearly trying to put that same requirement in
19 here.

20 We have on 174 the same slides that I showed you
21 previously showing you that Figure 7A does not have wire
22 frames in the other images, so it would be impossible to have
23 the change to the second line drawing appearing in a second
24 line drawing because it hasn't yet been displayed.

25 I showed you on previously on 7B that of course we know

1 that the line drawing -- the wire frame can be modified by a
2 user.

3 I am pointing out here that in their brief on 176, they
4 say, you know, a fundamental aspect of the so-called invention
5 of, I think they're talking about the '152 here, and
6 italicized, in all embodiments is the ability to concurrently
7 display features in two or more images, so that as the user
8 indicates features in one image, those changes are
9 concurrently displayed in other images.

10 But it's not in all embodiments, that functionality is
11 not in all embodiments, and putting Figure 7A on here because
12 that is an embodiment without concurrent display.

13 We have the same claim differentiation concept in the
14 '152. I think your Honor and Mr. Christi were discussing this
15 Claim 4 where there is displaying the feature in the first
16 aerial image as a first time, displaying a feature in the
17 second aerial image at a second time that is substantially
18 coincident to the first time.

19 What I'll note about this is putting aside whether
20 substantially coincident and simultaneous are the same, this
21 substantially undermines their claim that in the '152 patent,
22 because there is a displaying of projection from the 3D model
23 as a single step, it therefore must occur simultaneously.
24 Because what Claim 4 is telling you that there is displaying
25 the feature from the first aerial image at a first time and

1 displaying the feature in the second aerial image at a second
2 time. Now, whether it's substantially coincident, I think
3 your Honor suggested that that might not be the same thing as
4 simultaneous. If it does mean the same thing as simultaneous,
5 that would make their -- that would violate claim
6 differentiation. If it doesn't, that supports our view, and I
7 think it does, that something can happen in first line drawing
8 a first time and then be displayed in the second line drawing
9 at a second time.

10 And so, again, 178, this is the same table, if you
11 will, of their citations to what they say are concurrent
12 display. And in every instance I'm showing that what they've
13 omitted is the fact that they describe the embodiment, but the
14 page number on the left side of the scene is all that changed
15 because now we're talking about the '152 patent.

16 And so when we get to 180, they also have the
17 prosecution history estoppel. And, again, I've taken their
18 brief and they said, in addition to the claims and the
19 specification, Xactware's proposed construction and also
20 supported by the '152 Patent's prosecution history. During
21 prosecution, Eagle View distinguished its invention from prior
22 art by stating that the art did not display projections of
23 features on first and second aerial images.

24 Then they say, there are no figures of Pershing et al.
25 that show a projection of a feature onto any aerial images,

1 let alone a projection of a feature from a modified
2 three-dimensional model of a roof.

3 If this was a true prosecution history disclaimer, what
4 you would expect the patentee to be saying is our invention is
5 different from the prior art because we only always
6 simultaneous display. That's not what you see. I haven't
7 altered anything, that's their parenthetical and you can read
8 it, and if that's their best evidence that there's a
9 disclaimer, it's not a disclaimer. The federal circuit has
10 said repeatedly if you're going to read something out of the
11 patent that's a dramatic step, and if you're going to do that
12 based on the prosecution history, there has to be a clear
13 unmistakable disavowal of claim scope, and that is not what's
14 in that parenthesis.

15 I'm going to touch on the '737. If you were to flip
16 through these slides, you would see very much the same
17 references to Figure 7A, the fact that the prosecution history
18 doesn't support this addition.

19 But let me take you to what I think is the fundamental
20 problem with their approach to the '737 patent.

21 What I've done is I've taken the claim language on the
22 left that the defendants want you to construe and then I've
23 shown you on the right the construction they're proposing.
24 There's kind of a lot of things being cut out here and at the
25 end it's sort of the same kind of simultaneous display change.

1 But here's what happened -- here's what I understand
2 the defendants to be asking the Court to do. If I go to the
3 next slide, 183, what the defendants appear to have done is
4 taken part of asserted Claim 8 at the top, on 183, the "making
5 corresponding changes" from Claim 8, then they've taken part
6 of the "displaying corresponding changes to the line drawing"
7 language of Claim 25. Now, these are two different -- these
8 are about making corresponding changes and displaying
9 corresponding changes. But then what they do is they take an
10 unasserted Claim 26, this is a claim that we're not alleging
11 in this case, and they take that and they say, well, that's a
12 changing, by the computer system of the roof estimate report,
13 a line in a second line drawing that corresponds to the same
14 feature in the first line drawing that was changed, the change
15 in the second line drawing being made by the computer system
16 in response to the change that was made in the first line
17 drawing.

18 That language should sound familiar to you because it's
19 kind of similar to what's in the '454 and the '152, but it's
20 not in any of the asserted claims in this case. And so what
21 they're doing -- and then you look their construction and what
22 they do is they take that unasserted language, they poured it
23 over to their construction, they strike out all of the other
24 language that was in the asserted claims and they strike out
25 some more, including the same kind of deletion to the

1 relationship between the user making a change in the computer
2 making a corresponding change and they add in their
3 simultaneous display requirement.

4 The reason this is problematic is because the federal
5 circuit has said over and over and over if you're going to
6 construe claims, you start with the language of the claim
7 that's at issue. And I don't believe I've ever seen a case
8 where someone says, well, I know that the claim that we're
9 talking about says something, but I'm going to take you to a
10 claim that we're not talking about in this case and I want you
11 to take that language and I want you to put it into the claim
12 that we're talking about. There's a good reason for that,
13 because people write different claims when they're claiming
14 their invention, they have different species and ways of
15 expressing it.

16 So the remainder of '737 argument is essentially the
17 same. If you just flip through, you'll see it's got a lot of
18 familiarity, should have a lot of familiarity of the issues
19 we've already talked about in Figure 7A, their same effort to
20 just pull out examples as what the claim should be limited to.
21 And then they have a claim -- prosecution history disclaimer
22 argument that I don't think is compelling for the same reasons
23 we've already discussed.

24 I would like to, since we haven't heard about the '737
25 or I haven't heard the defendants' position, I would like to

1 reserve the ability to respond at least to that issue of what
2 claim language could we possibly be construing in a way that
3 would be faithful to what the federal circuit said to do when
4 you construe claim language in the '737.

5 THE COURT: Thank you.

6 MR. CHRISTIE: Whenever you're ready, your Honor.

7 THE COURT: Go ahead, please.

8 MR. CHRISTIE: Thank you.

9 In order to try and make things less confusing, Judge,
10 I'll finish up on the '152 patent and then go onto the '454
11 and finally the '737, with the Court's permission.

12 THE COURT: Sure.

13 MR. CHRISTIE: So, you know, you heard from Mr. Cutri
14 about the '152 patent. And, frankly, Judge it might be easier
15 for me to address some global issues, they have global
16 concerns and global issues with the three of these patents,
17 which again are part of the same patent family and,
18 accordingly, need to be construed consistently, so it might
19 save some time and I'll try to do that by trying to address
20 them globally. And then perhaps when I'm in the '454 and
21 '737, if there's more that needs to be said, I will say it.

22 Number one, we are not deleting claim language, Judge,
23 that seems to be a consistent theme here, we are suggesting
24 claim language which narrows and the scope and is more
25 precise. We're not saying change are not made in response,

1 we're not saying that they happen simultaneously, that they
2 happen concurrently. Big difference. So to say that we are
3 deleting things does not make sense here.

4 We've touched on and you heard me predict that they
5 would glorify Figure 7A, and they did. And again, for the
6 reasons that you understand, Judge, it's not relevant here.
7 We are not excluding an embodiment that makes sense in this
8 context. It is in the model review process after the wire
9 frame has been created and there's a review. It's not the
10 creation because, as you've seen, Judge, when we're talking
11 about the claims that are at issue here, we're in the model
12 generation, the model creation, the model construction phase.
13 It's timing. It's time based.

14 We talked also about the claim differentiation issues,
15 and I'll get to that in some of the other patents as well.
16 But Mr. Cutri basically says, you know, you lose either way,
17 heads I win, tails you loss because dependent Claim 4 if
18 substantially coincident, whatever that means, is not the same
19 as simultaneous, you lose. And if it is the same, you lose
20 because of claim differentiation. Nonsense.

21 Substantially coincident, whatever that may mean, is
22 not the same as simultaneous or concurrent. And claim
23 differentiation, which again is a presumption, doesn't come
24 into play. But even if someone were to think otherwise, there
25 is abundant, as we've seen, evidence which shows the

1 concurrency and the automatic display.

2 You saw Mr. Cutri also talk a lot about exemplary
3 embodiments. They don't say that this is an exemplary
4 embodiment, Figure 11, Figure 6A through D. Yes, the language
5 is there, Judge, in the patent. They say things like this is
6 an example of this, this is an example of that. But it's the
7 only example, it's only embodiment, Judge. So even though
8 they may use those prefatory words, exemplary embodiments,
9 it's what the specification teaches, and it's the only thing
10 the specification teaches in the context that we are talking
11 about, the simultaneity, the automatic, the concurrent.

12 So with that having been said, why don't I delve into
13 the '454 a bit and we can talk a bit about the '737.

14 So I specifically focused on the '152, Judge, because
15 that dealt with display, displaying a projection. These last
16 two claims deal with changing, we're dealing with a change
17 here -- a changing, by the computer system of the roof
18 estimate report system, a line in the second line drawing that
19 corresponds to the same feature in first line drawing that was
20 changed by the user, the change in the second line -- strike
21 that. The change in the second drawing being made by the
22 computer system in response to the change that was made by the
23 user in first line drawing. And again, this is Claims 26 and
24 33 of the '454 patent.

25 Again, Judge, this drives home the reality of what

1 we're dealing with. We're talking about a computer system and
2 we're talking about a user who is making changes. Your Honor
3 gets it. If you have a user in front of -- an interface
4 making changes, of course the user is going to expect and the
5 changes are going to be simultaneous, otherwise, how is the
6 user going to make successive changes. It's like slow dial up
7 for Internet, you wait and you wait and you wait.
8 Fortunately, we have Wi-Fi and fast Internet now, but the
9 expectation is that it's going to be instantaneous, it's going
10 to be simultaneous, it's going to be concurrent with regard to
11 the ability to make successive changes. That's what we're
12 talking about. That's what a computer system does. That's
13 what a user expects. And that's what a person of ordinary
14 skill in the art, most importantly, understands the term to
15 mean.

16 So again, Judge, the change that we are requesting to
17 make things clearer is the last clause, which adds the
18 language "so that the computer system simultaneously displays
19 the changes in both the first line drawing and second line
20 drawing." Again, simultaneity, concurrence.

21 Again, Judge, without belaboring it, that's how they
22 titled the patents, concurrent display, doesn't get much clear
23 than that.

24 But then let's look at the claim language. And
25 specifically I'm focusing your Honor's attention to Slide No.

1 61, which talks about Claim 26 of the '454 patent.

2 And you see, Judge, as is abundantly clear here, that
3 we're talking about a several step process. We're talking
4 about and I'm referring to the language that is boxed on that
5 slide. We have a user change to the line in the first line
6 drawing, in essence, that is something that automatically
7 triggers the corresponding change to the second line drawing.
8 Again, that the correspondence that we dealt with regard to
9 the line drawing terms that we dealt with. You make a change
10 in the first line drawing and, voilà, automatically you got
11 this corresponding change in the second line drawing. I don't
12 think there's any dispute, and we certainly don't dispute that
13 that is the case.

14 But what is clear is that these two changes are keyed
15 off of the same conduct, the user input. So the user is
16 making a change in the first line drawing and then it shows up
17 on the second line drawing. It seems that, you know, at
18 least -- at the very least from the claim language, that we're
19 talking about simultaneity, we're talking about automatic
20 actions.

21 Again, Judge, as opposing counsel, Mr. Cutri, mentioned
22 to you, and as I did as well, the specifications of these
23 three patents, the '737, the '454, and the '152, are almost
24 identical and have a lot of the same language, including the
25 same figures. So we're talking also about Figure 11. And, as

1 you may remember, Figure 11 was the flow chart which talked
2 about concurrent display. And without belaboring, Judge,
3 because there is some repetition and overlap, on Slide No. 62,
4 I'll just refer your Honor to Column 23, Lines 21 to 28, as
5 well as Column 23, Lines 29 to 39, which again has the same
6 language that we saw in the '152 patent with regard to Figure
7 11 talking about substantially at the same time, simultaneous
8 projection, concurrently display, so it's all there in spades.

9 But I also want to point your Honor's attention to the
10 next slide, again 6A through 6D, again the world of model
11 generation, model construction, not the world of model review
12 where we're talking about the same issues, where the
13 specification says the same things. And again, without
14 belaboring it and going into great detail over things I've
15 already talked about, in the first substantive bullet point, I
16 guess the second bullet point there, about halfway through the
17 paragraph, I want to point your Honor to Column 14, Lines 39
18 to 41, we talked about in the '152 patent simultaneity of
19 display, but it also carries over to the simultaneity of
20 changes. And you see the language here making it crystal
21 clear, changes that the operator makes to wire frame 611 are
22 concurrently displayed, the changes are concurrently displayed
23 by the roof estimation system at wire frame 612.

24 And the next bit, the next quote, again from the spec,
25 Column 14, Lines 54 to 57, the concurrently displayed wire

1 frame 612 is an interactive user interface element in that the
2 operator makes changes to wire frame 612 which are then
3 concurrently displayed in wire frame 611. Changes
4 concurrently displayed.

5 Next slide.

6 The remaining citations I have to the record, Judge,
7 are largely repetitive of those in the '152 patent, also
8 talking about automatic presentation, also talking about
9 concurrent display. And I won't belabor those, it's in the
10 slides, it's in our brief, and your Honor can review that at
11 his leisure.

12 Again, we have the prosecution history issues, which
13 Mr. Cutri finds unpersuasive. We obviously disagree. And
14 again, it's more specifically laid out in greater detail in
15 our moving brief at Page 33. But just to focus on it briefly,
16 again, we are talking about the Kennedy reference, they have
17 to respond to an office action because the Kennedy reference
18 has been raised to thwart there ability to get a patent so
19 they are contrasting what they do to the Kennedy patent. And
20 in so doing they are making it clear that we're talking about,
21 in this patent, the '454 patent, we're talking about automatic
22 display, as well as change, concurrent display, concurrent
23 change, and the like. And I won't belabor that because we've
24 already been over it.

25 And, finally, Judge, it bears mention that at the

1 bottom of that slide when they're talking about they're trying
2 to add on Claim 26, they characterize the claim in a manner
3 consistent with our construction and also rely on Figure 6A
4 through 6D, which again is the model construction realm in
5 which we're in, that's in Exhibit B, and that is more
6 specifically called out in our brief.

7 Also, I would be remiss if I didn't mention that our
8 expert, Dr. Mundy, Paragraphs 124 through 128 of his
9 declaration, specifically references this issue, an operator
10 changes in the first line drawing -- operator changes in the
11 first line drawing result in, quote, simultaneous changes
12 across views of the 3D model to the second line drawing.

13 He's a person of ordinary skill in the art. He knows
14 this backwards and forwards and, you know, he concurs with
15 what is in the specification, what is in the claims with
16 regard to the concurrency with regards to the automatic
17 simultaneity.

18 Again, there are these other issues that Mr. Cutri
19 raised about claim differentiation and again, he points to
20 Claim 29 which talks about substantially concurrent.

21 Okay. Substantially concurrent, substantially
22 coincident, we saw that. Whatever does that mean? Aside from
23 being indefinite, it sure isn't the same thing as
24 simultaneous.

25 So we don't have a claim differentiation issue because

1 we don't have that issue where the dependent claim can be read
2 into the independent claim. So that's not a point that is
3 worthy of your attention, Judge, and -- but even if it was,
4 again, it's a presumption.

5 The Federal Circuit makes it clear that claim
6 differentiation is not automatic, yes or no, it is a
7 presumption, and a presumption can be overwrought, overwhelmed
8 as it is in this case, with the specification evidence that
9 demonstrates automatic, simultaneous, concurrent display and
10 change.

11 We also have the issue of deleting text. And again, as
12 I've indicated, this is not deletion of text. We are not
13 deleting text, we are capturing and keeping the text, the
14 spirit of the text that's there, but again, making clear, as
15 we must, because there is only one embodiment that deals with
16 this issue, and it deals with simultaneity and automatic
17 display and changes, that that is included and made clear,
18 especially from the perspective of a user who demands it and
19 would not have it any other way. As well as the perception of
20 a person of ordinary skill in the art.

21 So, you know, Judge, they try mightily, you know, to
22 raise up these roadblocks with regard to our construction, you
23 know. They, you know, barely acknowledged the fact that the
24 specification is replete -- replete with all of these
25 references to automatic display, automatic change,

1 simultaneity, concurrence. It's there. They don't want to
2 focus on it. They want to go through and focus on
3 abstractions, because they realize that at the end of the day,
4 when you look at it, that is what controls here, that guides
5 the person of ordinary skill in the art to understand that
6 when we're talking about displaying, when we're talking about
7 changing, we're talking about something that happens
8 automatically, simultaneously and concurrently.

9 Finally, Judge, it might make sense for me just to
10 focus on the '737 Patent, if it's okay with Your Honor, and
11 I'll quickly go over that.

12 Again, much in the way of overlap. And for that -- for
13 that claim, we're talking about the '737 Patent, Claims 1, 8
14 and 25. 8 and 25 are in case Claim 1 as a dependent -- sorry,
15 an independent claim from which they depend. Again, the issue
16 is that we have claim language saying, quote: Making
17 corresponding changes, comma, by at least one processer of the
18 roof estimate report system, comma, to the line drawing
19 overlaying the second aerial image, as well as displaying
20 corresponding changes to the line drawing overlaid on the
21 second aerial image.

22 So again, we're talking about change, we're talking
23 about corresponding change. And again, we acknowledge that
24 there are corresponding changes as we've discussed when we
25 were dealing with the line drawing terms.

1 Not surprisingly, Judge, our construction for the
2 purpose of focussing and narrowing is the same as you've seen
3 in the past. We seek to add language to indicate the last
4 clause, so that the computer system displays the changes in
5 the second line drawing as the user changes the feature on the
6 first line drawing. Again, demonstrating the automatic
7 nature, the concurrence and the simultaneity.

8 Again, this patent is well -- they're all labeled and
9 titled concurrent display. It speaks volumes.

10 But let's talk a little bit about the claim language
11 and I'm specifically referring to Slide No. 69, where we talk
12 about Claim 1 of the '737 Patent. And again, this is, you
13 know, a common theme that we've seen just for the '454 Patent.
14 It's a stepped process. Again, we've got the user input,
15 changing the first line drawing and, voilà, automatically
16 triggering the corresponding change to the second line
17 drawing.

18 So again, we have that simultaneity, which is clear
19 from a logical perspective, clear from the perspective of a
20 person of ordinary skill in the art resplendent here in
21 Claim 1.

22 Next slide, please. And again, let me focus your
23 attention to Claim 16. Again, Judge, we have the issue of
24 concurrent display, and that's called out clearly in the claim
25 language itself, and you will see that it is in response to

1 changes in the line drawing overlaid on the first aerial
2 image.

3 Again, we have the correspondence, the changes to the
4 first line drawing automatically reaching out and touching the
5 second line drawing and making those same changes.

6 Again, I won't belabor it, Judge, Figures 11 and
7 Figures 6A through 6D, again, because specification is largely
8 the same amongst -- between and amongst these three patents.
9 You will find the same language, you will find the same
10 figures and I will not belabor it because Your Honor can look
11 at that when you wish.

12 But again, simultaneous projection is talked about,
13 concurrent display is talked about all over the place, and,
14 you know, that is the issue here. That is the guidance that
15 is provided by this specification as to how and under what
16 circumstances we have the display and we have the change.

17 Finally, Judge -- close to finally, we have, you know,
18 further evidence in the '737 Patent. I'll specifically refer
19 you to Column 3, Lines 28 to 32, where we've got a user
20 interface of the system currently displaying features, okay.
21 And even more. Column 5, Lines 49 through 63, we've got an
22 operator indicating a feature, the feature is simultaneously
23 projected in the multiple image views.

24 Okay. We've got simultaneity down pat as well.

25 And just to drive home the point, Judge, again, these

1 three patents are all in the same family, all share the same
2 common specification, so it's important that there be
3 consistency between and among the construction for all three
4 of them.

5 Finally, as more precisely laid out in our opening
6 brief at Page 39, we have a person of ordinary skill in the
7 art, Dr. Mundy, specifically at Paragraph 136, in which he
8 echos the fact that there is simultaneity of changes, and I
9 won't belabor that because it's there, and you can review it
10 when you wish.

11 Finally, and I do mean finally at this stage, we have
12 the same issues that we've addressed in the past. We are not
13 deleting claim language. We are puzzled by this argument that
14 we are trying to adapt on asserted Claim 26. You know, we are
15 not trying to shoehorn any particular unasserted claims into
16 this. We are being guided by the entirety of the
17 specification in order to limit and narrow the scope, which
18 otherwise would be confusing and unduly broad. So a little
19 unclear as to what Mr. Cutri means by that.

20 And again, we have the same unmeritorious claim
21 differentiation issues, we've got the substantially
22 coincidence. Nonsense again, which I've already discussed and
23 I don't need to say any further words about them.

24 They've got the dependent Claim 21, which talks about
25 displaying, substantially at the same time as receiving.

1 Here, we're not talking about displaying at substantially the
2 same time as receiving, we're talking about simultaneous
3 display to images. There's no receiving element to it.

4 So again, their claim differentiation argument holds no
5 water.

6 With that, Judge, I just want to end with saying, it's
7 important, as Your Honor knows, to think about this from the
8 perspective of a person of ordinary skill as we must, the user
9 as we must. This is a computer system. This is displays of
10 side-by-side images, making changes to one, having them appear
11 on the other, and it's a no-brainer, Judge.

12 Logic dictates that it must be simultaneous when you
13 are doing the model construction, the model generation, which
14 is where we are at now. Again, we are not in the model review
15 world, so Figure 7A and the supporting specification with
16 regard to interpreting that figure has no merit here and
17 should be disregarded. Thank you.

18 THE COURT: Thank you.

19 MR. CUTRI: Your Honor, I'll -- we appreciate the
20 Court's time and attention today, and if we don't get a chance
21 to say so, I'll say so on behalf of the entire team and I
22 think on behalf of both parties, we really appreciate the
23 Court's efforts and, of course, the Court's staff as well.

24 THE COURT: That's what you pay us for.

25 (Laughter.)

1 THE COURT: We're here to serve.

2 MS. WALSH: Not a lot, though.

3 THE COURT: It is what it is.

4 MR. CUTRI: Well, Your Honor, I'll be as brief as I
5 can. First, on the deletion issue, there's definitely -- if
6 we go to Slide 153, I think I heard opposing counsel say we're
7 not deleting text. On Slide 153, they most assuredly are
8 deleting text. They're saying they don't have a problem with
9 the concept being in the claim, so I think the better course
10 and certainly the Federal Circuit's guidance would be to not
11 change something, especially where the other side or where the
12 proponent of the construction openly admits that that concept
13 should be captured and left in the claim.

14 On excluding the embodiment, excluding 7A, which I'll
15 go to one -- Slide 162, if we could.

16 Actually, on 156, this embodiment that we have talked
17 about a number of times, what opposing counsel has said is, at
18 the very end, we should just disregard this. That was the
19 very last thing he said, we should just disregard it, and I
20 think his position is -- the defendant's position is we're in
21 -- we're in model generation world, not model review world.
22 The claims don't say anything about this should be limited to
23 a model review or this should be limited to a model
24 generation.

25 There's nothing in the claim language that would compel

1 you to say, well, I'm just going to decide that this
2 particular claim is only applicable in this one narrow
3 circumstance and I don't -- and the Federal Circuit is
4 certainly very clear about not departing from claim language
5 unless it's absolutely required in very narrow circumstances.

6 I did not hear anything from opposing counsel on this
7 issue, which is on 162, the fact that there is explicitly
8 described in a dependent claim -- in a dependent claim that
9 you can display a second line drawing overlying the second
10 aerial image on the same display at a later time.

11 There was nothing in -- defendants simply don't have a
12 response to the fact that a dependent claim is -- actually
13 completely contradicts their claim construction.

14 There are -- there were a number of references to the
15 fact that there were multiple examples of concurrent display.
16 The defendants say, look, there are a number of examples of
17 concurrent display. We don't disagree with that. Even if
18 there were only examples of concurrent display, that would
19 still not be sufficient to limit this claim in that way
20 because the Federal Circuit on 163 say that the specification
21 and prosecution history only compel departure from the plain
22 meaning in two instances.

23 So, in other words, you don't impose a requirement, you
24 don't write in new claim language by way of a construction
25 unless you're in two narrow circumstances: One, is the

1 patentee acting as their own lexicographer and saying, here is
2 my definition of the display requirement. Display means
3 displaying simultaneously. There's no glossary like that.

4 And then, two, was there anything in the file history
5 where the applicant said, I am disclaiming everything except
6 simultaneous display.

7 And this isn't a situation where the embodiment 7A or
8 the embodiments they're talking about are informing claim
9 language, the simultaneous embodiments. They're just taking
10 that embodiment, they're just taking the simultaneous display
11 embodiment and they're saying, just put it into the claim.

12 And so I think with that, unless Your Honor has further
13 questions, I can conclude.

14 THE COURT: I don't have any further questions.
15 Thank you.

16 MR. CUTRI: Thank you.

17 THE COURT: Is there anything else that counsel want
18 to --

19 MR. ALPER: Nothing from us. Nothing from us, Your
20 Honor.

21 THE COURT: -- talk about?

22 MR. CHRISTIE: Nothing from defendants, Your Honor.
23 Thank you.

24 THE COURT: All right. I almost hate to ask this
25 question though, are you seeking leave to submit anything

1 further in writing?

2 MR. ALPER: No, Your Honor, not from us.

3 MR. CHRISTIE: No, Judge. We will rest on our briefs
4 and our submissions. Thank you.

5 THE COURT: Thank you. Well, let me first thank
6 counsel. That was a -- that was a real education. I actually
7 thought that this technology is very interesting stuff, and I
8 want to thank the experts for explaining the technology and
9 the history of this technology. That also was very
10 interesting to me.

11 And counsel, you did a great job presenting the issues
12 to the Court. I am going to issue a written opinion in due
13 course in this. I don't -- I mean, thank you for narrowing
14 the issues. I mean, I've had some of these where there's
15 hundreds of disputes between counsel, and this is relatively
16 manageable.

17 So I don't imagine this is going to take too long for
18 me to get back to you. But my initial impressions remain, and
19 that is, I do think that many of these terms are not
20 ambiguous, and don't require the Court to do a lot of
21 construction of them.

22 But as I said, you will get something from me in
23 writing. Thank you very much. I'll be in touch.

24 RESPONSE: Thank you, Your Honor.

25 (4:51 p.m.)

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